

New Powers for Labor Board Raise Storm of Controversy

Executive order and NRA interpretations draw criticisms of industry and labor—Wagner preparing amendment to N.I.R.A. collective bargaining sections

by L. W. Moffett

A TEST of the authority of the National Labor Board appears to be near at hand. It promises to grow out of attempts to exercise the powers over employee elections which the President's executive order of Feb. 1 vested in the Board.

In addition, there is a possibility that Congress will be requested to enact legislation clarifying Section 7 of the National Industrial Recovery Act to settle some of the controversies that have raged over its meaning. To this end, Senator Robert F. Wagner, chairman of the Board, is preparing an amendment to the act designed to liberalize the collective bargaining guarantees. The proposed amendment is expected to provide for collective bargaining by one union, rather than by majority and minority representatives. The Senator also is expected to introduce legislation creating a permanent National Labor Board.

There is the additional possibility that labor also will ask Congressional action giving legal substance to its views on the meaning of collective bargaining. While A. F. of L. President Green's first statement on the executive order made it clear that he regarded it as a step in the right direction, the subsequent interpretation issued jointly by General Johnson and NRA counsel Richberg is understood not to have been so favorably received by

the leaders of the workers' organizations.

The vigorous statement coming from the American Iron and Steel Institute attacking the interpretation placed on the order in an NRA press release, contains points that have not been smoothed out. This despite the joint interpretation issued by Messrs. Johnson and Richberg the latter also being the author of the executive order. This statement was presented as an explanation because of what was called an "erroneous press" interpretation of the President's order.

The joint statement apparently did smooth over one complaint made by the Institute. For it was declared that "In so far as the statement in the (NRA) press release might be read as saying that employees' representatives in all company unions are chosen by employers it was not intended as there is no evidence that such is the case." The press release referred to had stated that the President's order is the direct result of the growing tendency on the part of industrial managements to build up "company unions" in their plants, and

then followed with the declaration that "These unions are operated by employees' representatives chosen by the employer rather than by the employees themselves." The institute

branded this statement as a "flagrant misrepresentation of facts." The Johnson-Richberg statement, moreover, denied that "it is true that employees, if permitted to act in their own free choice, may not select a company union (meaning local plant union)."

The joint interpretation also was intended to meet a point raised by James A. Emery, general counsel for the National Association of Manufacturers, who discussed the executive order with General Johnson shortly after it was promulgated. Mr. Emery charged that the order reversed previous NRA rulings that Section 7-a of the Recovery Act permitted minorities or individuals to bargain with employees, one such ruling, in effect having been made in a joint statement on Aug. 24, 1933, by Mr. Johnson and Mr. Richberg. Their statement of Feb. 3, however, said that the one of last August provides an interpretation of Section 7-a which has not been changed and is not modified by the executive order. It was also pointed out that the selection of majority representatives does not restrict or qualify in any way the right of minority groups of employees or of individual em-

The President's Order

BY virtue of the authority vested in me under Title I, of the National Industrial Recovery Act, approved June 16, 1933 (Public No. 67, 73d Cong.), and in order to effectuate the policy of said Act, I, Franklin D. Roosevelt, President of the United States, do hereby provide for and direct the enforcement of certain provisions of Section 7 (a) of said Act and the conditions contained therein, as incorporated in, and made a part of, any code of fair competition, or agreement heretofore or hereafter approved or prescribed by me in the following manner:

1. Whenever the National Labor Board shall determine, in such manner as it sees fit, that a substantial number (as defined in the discretion of the Board) of the employees, or of any specific group of employees, of any plant or enterprise or industrial unit of any employer subject to such a code or agreement, have requested the Board to conduct an election to enable them to choose representatives for the purpose of collective bargaining or other mutual aid or protection in the exercise of the rights assured to them in said Section 7 (a), the Board shall make the arrangements for and supervise the conduct of an election, under the exclusive control of the Board and under such rules and regulations as the Board shall prescribe. Thereafter the Board shall publish

promptly the names of those representatives who are selected by the vote of at least a majority of the employees voting, and have been thereby designated to represent all the employees eligible to participate in such an election for the purpose of collective bargaining or other mutual aid or protection in their relations with their employer.

2. Whenever the National Labor Board shall have determined upon an investigation, or as the result of an election, that the majority of the employees of an employer, or the majority of any specific group of employees, have selected their representatives in accordance with the provisions of said Section 7 (a), and shall have certified the names of such representatives to their employer, and thereafter upon complaint or on its own motion, the Board shall determine that such an employer has declined to recognize or to deal with said representatives, or is in any other way refusing to comply with the requirements of said Section 7 (a), the Board shall report its determination promptly to the Administrator for Industrial Recovery for appropriate action.

3. The powers and duties herein conferred upon the National Labor Board are in addition to, and not in derogation of, any powers and duties conferred upon such Board by any other executive order.

ployees to deal with their employer.

Nevertheless, the interpretative joint statement declared that "as a practical proposition the National Labor Board would find it impossible to deal with every controversy that might arise between rival groups of employees. . . . Nor could any employer maintain satisfactory relations with his employees through unlimited negotiations with an indefinite number of employee representatives expressing every possible variety of opinion. The most important question to be solved in carrying out the purpose of Section 7-a is to determine who are the representatives of the majority of the employees affected. It is for the purpose of solving that problem that the executive order was issued, which in no way excludes the exercise of rights of minorities or individual."

The executive order, however, says that representatives chosen by a majority of the workers "have thereby been designated to represent all the employees" and apparently was intended to forestall the contention of either side that an election was not representative because its supporters did not participate.

The Johnson-Richberg statement also sought to answer the charge of the Steel Institute that "for elections to be ordered by the National Labor Board upon the request of a mere handful of employees in any

plant would mean constant disturbance and confusion in the industry." This was seen in the declaration that "The executive order provides a method whereby any specific group of employees or all employees of a plant or of one employer may select, by a majority vote, representatives clearly empowered to act for the majority in their relations with their employer."

It is believed that this will be a point of sharp conflict as will be the sweeping powers the executive order gives the Board to determine "in such manner as it sees fit" when a substantial number (as defined in the discretion of the Board) of employees, or any specified group of employees . . . have request the Board to conduct an election."

The order was a direct outcome of the Board's controversy with the Weirton Steel Co. Acting under its authority, the Board's investigators have been sent to Weirton to conduct a house-to-house poll of Weirton workers to determine who they want to represent them in collective bargaining. It is reported that they are without a certified list of employees and there is a possibility that the Weirton company will ask an injunction to prevent taking a poll without such a list. Weirton attorneys are understood to take the position that the Board has no power to enforce its orders and that it can merely mediate in a manner similar to boards estab-

lished during the World War. The proposed poll apparently is the Board's method of determining "in such manner as it sees fit" whether an election should be held.

Senator Wagner gave scant attention to the Steel Institute statement, dismissing it with the comment that "The Board heard all that argument last autumn and went right on sticking to its work, and will continue to do so."

This brief comment, however, was held to join the issue and invite a test of the powers of the Board. While the Weirton case very likely will take front rank in the test, a somewhat similar controversy involving the Budd Manufacturing Co. quite possibly will be a close second.

Under the interpretation placed on the executive order, it would be a code violation, and therefore referable to the National Compliance Board, for an employer not to recognize representatives chosen by a majority of votes in an election conducted by the National Labor Board. Hence the cases, if they develop, promise to hinge on charges of code violation. The Budd company already has been charged with violation of the automobile code, but the Weirton case has been referred to the Department of Justice, though no action has been taken in either case.

All doubts concerning the authority of the National Labor Board

have not been swept aside by the executive order as even among its supporters there as those who are uncertain as to its powers. Furthermore, there is a growing belief that the Board should be reorganized in an effort to make it more effective. The result may be the setting up of Board panels at an early date, one representing industry and the other labor, with an impartial chairman. Objection has been raised that in the past cases have come up when representatives of only one faction of the Board have been present at the hearing, and this side representing views contrary to those coming before the board.

President William Green of the American Federation of Labor, commenting on the executive order, said it was "a good first step to put teeth" in the collective bargaining section of the Recovery Act, "but only a first step." He declared that the President's order is good in that it enables the National Labor Board "to step in and conduct an election whenever the Board sees fit, without waiting for a condition of strife to develop and especially in that it provides that the employer shall recognize these elected representatives and deal with them."

Going further, however, Mr. Green said that "Until it is inter-

preted that representatives financed by the company, even though elected by the employees, are not proper representatives of the employees for purposes of Section 7-a there is unfair competition between company unions and bona fide labor unions." After giving his definition of a company union as an "employees' organization initiated by the company, financed by the company, controlled by the company," Mr. Green declared that elections in individual plants supervised by the National Labor Board should not be confused with real collective bargaining. He insisted "there is need for organization of workers on a basis at least as wide as the organization of employers in trade associations for code making and code enforcement. In the long run we must look to independent organization of workers on a national or international basis for real collective bargaining."

Union leaders are said to hold that Section 7-b of the Recovery Act charges NRA with promoting contracts between employers and employees, and that such contracts have the same status as a code of fair competition. Consequently they argue that for a minority or an individual to reach an agreement with their employer cutting under the contract, constitutes chiseling in

the same manner that failure of any code member to live up to code standards is a violation. This line of argument leads obviously to the conclusion that minorities must abide by contracts entered into by the majority. Moreover, by inference, it indicates that labor expects the members of an industry to bargain collectively with the representatives of their workers. This contrasts with the stand taken by the automotive industry in the tool and die strike last fall that each company would bargain with the representatives of its workers—in other words that while the Recovery Act permits labor to organize for bargaining as it sees fit, the members of an industry may bargain individually and are under no compulsion to act collectively.

At a press conference on Feb. 2, General Johnson said that he did not interpret the order as in effect legalizing the closed shop. A question also was raised as to the significance of the word "group" in the order. It was asked whether a substantial number of a group or a group of employees means all of a certain craft in a given plant. The answer was "Yes, that was the reason 'group' was used because there are several of these industries that have half a dozen unions in their plants."

NRA's Interpretation

A joint statement by National Recovery Administrator Johnson and N.R.A. Counsel Richberg

1. The Executive Order provides a method whereby any specific group of employees or all the employees of a plant or of one employer may select, by a majority vote, representatives clearly empowered to act for the majority in their relations with their employer.

2. This selection of majority representatives does not restrict or qualify in any way the right of minority groups of employees or of individual employees to deal with their employer.

3. Section 7 (a) affirms the right of employees to organize and bargain collectively through representatives of their own choosing; and such concerted activities can be lawfully carried on by either majority or minority groups, organizing and selecting such representatives in such manner as they see fit. Also, in affirming this right of collective action the law lays no limitation upon individual action.

4. The joint statement issued by the Administrator and the general counsel on Aug. 24, 1933, concerning Section 7 (a) provides an interpretation of this section, which has not been changed and is not modified by the Executive Order.

5. The purpose of the Executive Order is to provide a definite workable method for the selection by the majority of any group of employees of their representatives who will thereupon be entitled to recognition as the representatives of the will of the majority of the employees eligible to join in that selection.

6. As a practical proposition the National Labor

Board would find it impossible to deal with every controversy that might arise between rival groups of employees, each seeking to represent a fraction of employee opinion, or to conduct thousands of elections so that every little group of employees could select representatives to represent every fraction of employee opinion. Nor could any employer maintain satisfactory relations with his employees through unlimited negotiations with an indefinite number of employee representatives expressing every possible variety of opinion. The most important question to be solved in carrying out the purposes of Section 7 (a) is to determine who are the representatives of the majority of the employees affected. It is for the purpose of solving that problem that the Executive Order was issued, which in no way excludes the exercise of rights by minorities or individuals.

7. As has been pointed out frequently the right of collective bargaining is not the right to obtain a specific contract, because a contract must be the result of an agreement, and neither employees nor employers can be compelled to enter into a specific contract. But it is to be assumed that if both employer and employees are assured that the representatives of the employees have been selected freely and without coercion to represent the desires of a majority of those affected, then any contract resulting from such collective bargaining will stabilize employment conditions and produce the most satisfactory relations possible between employer and employees.

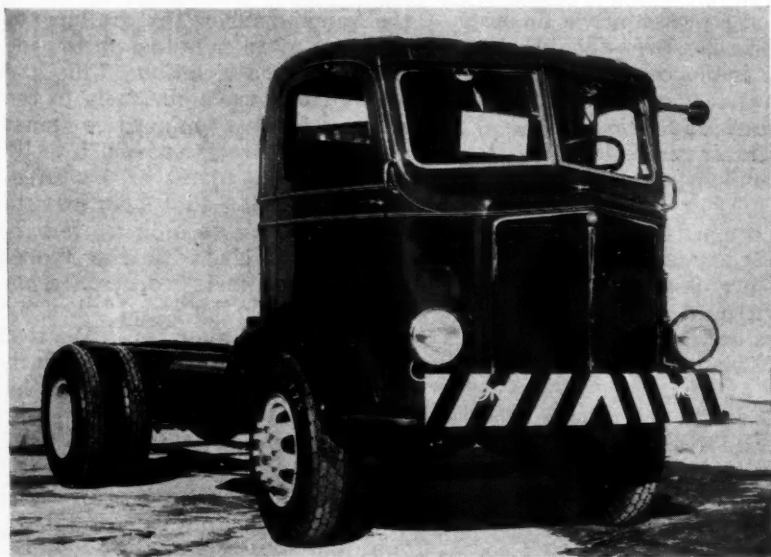
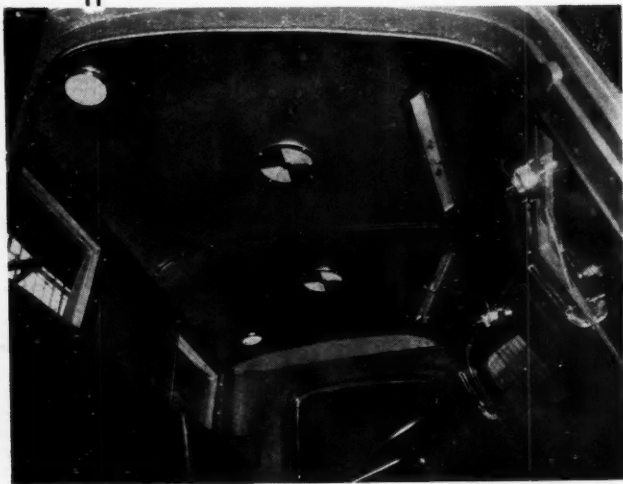


Fig. 1 (Above)—G.M.C. Cab-over-engine group is leader of 1934 heavy-duty line

Fig. 2 (Right)—Interior view showing split seat construction and inside hood making overhead valve mechanism accessible for quick adjustment and repairs

Fig. 3 (Below)—View inside cab giving details of air conditioning system. Two doors at header are adjustable to draw in fresh air through louvers above the windshield. Ventilators in ceiling draw out the spent air which leaves by ducts in ceiling communicating with louvers in roof



THREE cab-over-engine models lead the parade of the new General Motors heavy-duty truck line for 1934. The complete line, ranging from 9500 lb. gross load to 30,000 lb., is offered in three distinct types. Models T-18 to T-43T have the conventional axle position with load distribution of 25 per cent front and 75 per cent rear. Models T-51 to T-84 have a set-back

front axle resulting in a weight distribution of 30 per cent front and 70 per cent rear. The three cab-over-engine models have weight distribution of $33 \frac{1}{3}$ per cent front and $66 \frac{2}{3}$ per cent rear.

All models are thoroughly redesigned for heavy-duty performance and are equipped with coach type sheet metal in keeping with this heavy duty.

The 331 and 400 series engines are the same as they were in 1933 except for detail design changes of importance to the operator, all engines in the line being of overhead valve construction. One major change is the location of the water pump at the front end at the fan pulley.

The 450 engine is similar to the well-known 400 series except for the bore, which is $4 \frac{1}{4}$ for the former and $4 \frac{1}{2}$ for the latter. On both engines the oil cooler is positioned at the front end, where it is readily accessible. The fan drive is of heavy construction mounted on roller bearings. Generators are belt-driven with plenty of space to permit optional capacity rating sizes.

The new 450 engine develops 120 hp. at 2300 r.p.m. and 340 ft. lb. torque at

W Cab-Over-Engine Models Are n G. M. Truck Line for 1934

Models now available with 25, 30 and 33½ per cent of load on front axle—Gross weights in new line range from 9,500 to 30,000 Lbs.

800 to 1200 r.p.m. It is fitted with a hard chrome nickel iron cylinder head, tulip type exhaust valves, and stellite exhaust valve seats. All main and connecting rod bearings are thin wall precision type, of a steel backed copper-lead alloy.

All exhaust valve heads are now of special austenitic steel—21 per cent chromium, 12 per cent nickel—the structure of which is said to resist high temperature effects. Valve stems are of heat-treated, chrome-nickel steel with special hardened tips.

Cab-over-engine models are designed to meet the present demand for more payload with legal axle loading, and shorter train length for the same capacity.

by Joseph Geschelin

Engineering Editor,
Automotive Industries

Driver comfort as well as service accessibility have been engineered into the design of the cab-over-engine models.

To assure driver comfort the design embodies, first, a means of carrying away engine heat by a wind tunnel engine shroud which conducts the under-

hood air and gases to the under side of the body mounting. The second feature is a patented ventilating system built into the cab construction. Fresh, cool air is taken in through ducts above the windshield and led into the interior by means of hand-controlled doors which can be adjusted by the driver to allow as much or as little as he may want. Air is exhausted from the compartment by ventilators in the ceiling. This air is taken through ducts in the roof and

Fig. 4 (Right)—Entire power plant slides out on sub-frame rolling on side rails. It can come out part way or can be entirely removed from chassis for major overhaul

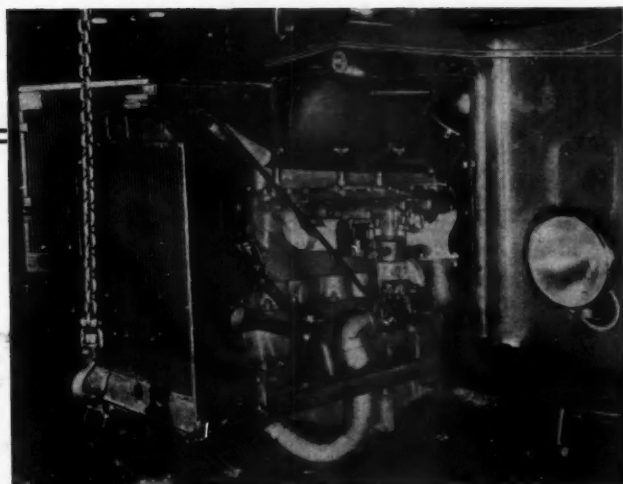
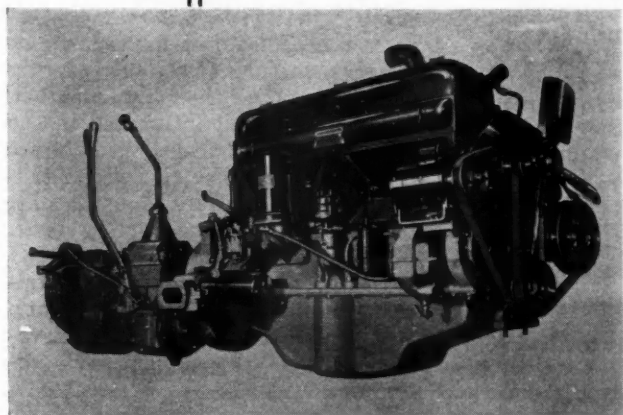


Fig. 5 (Left)—New series 450 engine is same as 400 in detail except for larger bore. Both heavy-duty power plants have water pump relocated at fan mounting and oil cooler moved forward to timing gear case for accessibility

General Specifications of 1934 GMC Heavy Duty Truck Line

MAKE AND MODEL	Tonnage Rating	Chassis Price	Standard Wheelbase	Gross Vehicle Weight	No. of Cylinders Bore and Stroke	Max. Brake H.P. at R.P.M. Given
Group 1—Conventional Axle Design (25% front; 75% rear)						
T-18	1½-2	625	140	9500	6-3⅜x4⅝	69-2800
T-23	2-3	795	140	11000	6-3⅜x4⅝	69-2800
T-33L	2-3	1160	142	12500	6-3⅜x4⅝	69-2800
T-33	3-3½	1395	142	14000	6-3⅜x4⅝	76-2500
T-43	3½-4½	1595	142	16000	6-3⅜x4⅝	76-2500
T-43T	3½-4½	1995	142	16000	6-3⅜x5	94-2500
Group 2—Set-back Front Axle Design (30% front; 70% rear)						
T-51	4-5½	2775	145	20000	6-3⅜x5	94-2500
T-51W	5-6½	2895	145	23000	6-3⅜x5	94-2500
T-51H	5-6½	3095	145	23000	6-3⅜x5	94-2500
T-61	5-6½	4095	145	23000	6-4⅜x5	110-2300
T-83	5-7½	4985	145	26000	6-4⅜x5	110-2300
T-84	7-9	5260	145	30000	6-4⅜x5	120-2300
Group 3—Cab-over-Engine Design (33 1/3% front; 66 2/3% rear)						
T-73	3-3½	2995	94	15000	6-3⅜x4⅝	76-2500
T-75	5-6½	4995	94	24000	6-3⅜x5	94-2500
T-78	7-9	5995	94	30000	6-4⅜x5	110-2300
Six Wheelers—						
T95 4R	9-11	7695	189	40000	6-4⅜x5½	128-2100
T130 4R	12-15	9490	189	50000	6-4⅜x5½	149-3100

drawn out by the suction over the cab through openings in the roof at the front of the cab. The whole arrangement is flexible and weather-tight.

For service accessibility, adjustments or repairs to the valve mechanism are readily accomplished from within the cab by simply lifting the hood. For major adjustments or overhaul, the entire engine unit can be slid out in a very simple fashion.

For this purpose, the powerplant is mounted on a sub-frame which runs on rollers in the side rail. To slide it out, the bumper is removed by taking out the studs at the front, the radiator grille is swung out on its hinges, and the unit may then be pulled out by attaching a crane hook to its front end.

The 1934 trailer line features bigger brakes with B-K booster power, tubular rear axles, and one-piece drop frames. Four-wheel trailers now fea-

ture an improved turning circle achieved by an interlocking ring design which eliminates the two clamps formerly used to hold the upper and lower sections. Two automatic models are available featuring a screw type full automatic construction operating on the same principle as a Yankee screw driver.

Larger truck models, T-83 and T-84 series, are equipped with Westinghouse air-operated brakes with Westinghouse shoes, individual diaphragms for each wheel and slack adjusters. This equipment is also available optionally on the T-61 series. Where air brakes are used, the compressor is mounted at the front end of the engine on the left side and is driven by belt.

All heavy-duty models are fitted with large spring bumpers. Entrance to the cab on cab-over-engine models is

by a step at the front end ahead of the wheel housing, the door being hinged at the rear.

Gross rating on the set-back front axle series T-51 to T-83 has been increased by 1000 lb., the model T-84 being increased by 2000 lb. On the standard models, the T-18 and T-23 carry 500 lb. more gross, while the T-33 has been stepped up 1000 lb.

On cab-over-engine models the wheelbase options are as follows: T-73, 94-106-124-142 in.; T-75, 94-106-124-142-160 in.; T-78, 94-106-124-142-160 in. Body length back of cab on each of these models is as follows: T-73, 10 ft. 6 in., 12 ft., 15 ft., 18 ft.; T-75, 9-11-12-15-18 ft.; T-78, 9-10-12-15-17 ft., respectively corresponding to each wheelbase.

Brakes on the cab-over-engine models are vacuum booster-operated Bendix two-shoe internal, expanding on all four wheels, on the T-73 and T-75, while the T-78 has the Westinghouse air brake equipment which is standard on series T-83 and T-84.

New wheelbase lengths of 140¼ in. and 164¼ in. give the model T-18 load spaces which conform to the S.A.E. standards for 9 and 12 ft. bodies. Prices on the T-18 are \$625 for the "A" wheelbase and \$650 for the "B" wheelbase.

The model T-23 with its increased gross rating incorporates all the features of the T-18 except that certain units such as the rear axle, tires and brakes are of larger capacity. On this series the price of the "A" wheelbase chassis is \$795 and \$820 on the "B."

Going Artistic

The typography and art treatment incorporated in certain machine tool literature is to be commended. The machine people realize that the production man is just as interested in a good looking catalog as the buyer in any other field. For this reason we recommend a reading of the new catalog just issued by Landis Tool. It shows an appreciation of the problem and represents an earnest effort to give the production man a readable and good looking piece of literature.

Achievements 1933

Westinghouse has just issued its yearly summary of the engineering achievements of their organization. If you are at all interested in the wonders of electrical devices in the form of radio, electric eye, instruments, prime movers, and the like, be sure to get a copy of the book. More was accomplished in 1933 than anyone outside of the electrical field can possibly appreciate. Ask for "Engineering Achievements, 1933," if you want to be up-to-date.

JUST AMONG OURSELVES

Advertising Costs Per Car Sold

ADVERTISING cost per car varies widely. It always has and probably always will. Looking at high figures, however, it doesn't do to jump at the conclusion that a new agency is needed—or a new car—or vice-versa. It is dangerous to guess without full knowledge of inside facts whether the trouble is too much expenditure or too few sales. The trouble may be in the dealer and merchandising organization. Or there may not be any trouble at all. The advertising may have been called upon for a special job at a special time with full recognition in advance that the temporary cost per car would be high.

Combinations of figures published by National Advertising Records of *national magazine advertising expenditures* in 1933 with retail sales figures as published in *Automobile Trade Journal* (December estimated) give some interesting comparisons. Plymouth, which showed bigger percentage sales gains last year than any other low-priced car, spent about \$2.60 per car in national magazine advertising, and Chevrolet, which also recorded substantial gains, about \$1.36 (if our pencil didn't slip). At the other end of the scale, Cadillac topped the high-priced group with about \$38.47 per car, followed by Packard with \$29.83 and Pierce-Arrow with \$24.99.

Among the middle-priced producers, Nash shows about \$24.88 per car; Hupmobile about \$23.36; Chrysler about \$9.06; Buick about \$8.96; and Stude-

baker about \$4.11. Others figure out like this: DeSoto about \$10.27; Oldsmobile about \$10.41; Dodge about \$5.22 and Pontiac about \$5.41.

* * *

A Handsome Share For Broadcasting

DESPITE rabid differences of opinion among automotive executives about its value, radio gives every evidence of having become a permanent and growing part of most automotive advertising budgets. Last year saw increased expenditure for broadcasting by automobile as well as by parts companies seeking after-market business. Tire companies comprised the only automotive group to decrease radio network broadcasting expenditures in 1933 as compared with 1932.

Automobile manufacturers last year spent a bit more than 2½ times as much in national magazine advertising as in network broadcast advertising. This ratio gives some idea of the relative importance which radio has assumed in automobile selling in the few short years of its existence, although it is based on only a segment of total advertising outlay in both factors.

Automobile manufacturers, we learn, spent \$1,863,436 in network broadcast time last year, as against \$1,072,899 in 1932. Producers of after-market products spent \$107,389 as compared with \$93,790. Tire makers cut their expenditures from \$772,405 to \$347,484. Of these total automotive expenditures, NBC got 77 per cent and CBS, 23 per cent.

Some Good Old-Fashioned "Rasping"

FORD is starting to use the radio this month, as everybody knows, featuring Fred Waring's Pennsylvanians and various guest artists. From recent publicity announcing the broadcasts, we cull the following sentence which we believe should have the prize for candidness—or something:

"Poley McClintock, the 'frog-voiced' drummer of the band, who hails from Tyrone, Pa., will hereafter rasp the microphones twice weekly with his curious vocal equipment."

We are going to listen in if possible, because we haven't heard any good old-fashioned rasping since the Villain stole the Chee-ild long before microphones were dreamed of—much less invented.

* * *

New Faces in the Automotive Gallery

JUST about the time the gossips become convinced that the automobile business is about to settle down in the hands of three or four big organizations, backstage reports of new producing companies and possible satisfactory reorganization of unstable old ones always seem to pop up to confuse the prophets.

About three-quarters of these latter reports usually turn out to have been born of hope rather than money, but we will be much surprised if at least two or three of those making the rounds right now don't finally turn into going or regoing organizations eventually.

The day hasn't passed for introduction of new names, new products and new manufacturing outfits in the automotive field. It is our guess that there are new ones—and good ones—still to come—N. G. S.

Some Delivered Prices Unsettled Despite New Code

NEW interpretations of the automobile dealers' code covering a number of important points, including delivered prices and fleet discounts, have been issued by the National Control Committee of the Motor Vehicle Retailing Trade Code Authority. The latest ruling on delivered prices differs materially from that issued during the New York Show. While it clarifies some points there is still room for differences of opinion as to what may or must be included, particularly in connection with advertising charges. The fleet discount plan generally follows the interpretation issued some weeks ago quite closely.

Some of the more important interpretations follow:

Delivered Prices

The question of what may and what may not be included in delivered prices hinges on the meaning of Article LV B 1 in the code, which reads:

No dealer shall sell a new car at retail to a consumer for less than factory list prices, plus an amount equal to

- (a) Equipment at list prices.
- (b) All taxes paid by dealer applicable to the motor vehicle sold.
- (c) Average cost of transportation from factory of said dealer or shipments received by said dealer during a 60-day period, as shown by sworn statement of said dealer.
- (d) Dealer's actual cost of handling including such items as (w) unloading, (x) assembling, (y) conditioning for delivery, and (z) interest actually paid by said dealer, but not to exceed 60 days, on the cost of transportation.

The interpretation of this language is contained in a letter which NRA Deputy Administrator Ammerman wrote replying to the following communication from the dealer Code Authority.

With respect to delivered prices of motor vehicles under the Code of the Motor Vehicle Retailing Trade, the following items are in accordance with the interpretation of Jan. 23, 1934, viz.,

In determining delivered prices under Article LV, Section B, Marketing Rules:

All charges made by factory to dealers must be included, plus any additional items of cost of handling if actually incurred, whether or not specifically mentioned in paragraph (d) of Subsection 1 of Section B of Article IV.

1. List price of new motor vehicle.
2. List price of equipment.
3. Taxes.
4. Average cost of transportation, either
 - (a) From factory to point of distribution of factory, plus
 - (b) From point of distribution to dealer's place of business.
 (Some factories ship direct to dealers, some to

a point of distribution of factory, so there are two charges for freight.)

5. National advertising paid for by manufacturer and charged to the dealer.
6. Charges by factory for conditioning paid for by dealer to the factory.
7. Any other charges passed by factory to dealer, not specifically listed under headings shown above.

The above are items which are billed to the dealer by the manufacturer and "must be" included in the charges made by the dealer to the consumer, according to the above interpretation.

The following charges have been listed by various dealers as being proper under paragraph (d), Subsection 1 of Subtitle B of Article IV:

(In order to clarify the word "handling" as used in the Code of the Motor Vehicle Retailing Trade, it is suggested that it be interpreted to mean unloading, assembling, conditioning for delivery, interest as defined in the code, and to include such items listed below):

- | | |
|---|---|
| 1. Installing or attaching extra equipment. | 16. Testing motor. |
| 2. Installing tools. | 17. Gas. |
| 3. Fitting carpets. | 18. Oil. |
| 4. Changing wheels. | 19. Grease. |
| 5. Changing tires. | 20. Direct time of labor employed. |
| 6. Changing defective fenders. | 21. Overhead of labor employed. |
| 7. Washing. | 22. Cost of new materials. |
| 8. Polishing. | 23. Inspections. |
| 9. Cleaning. | 24. Road tests. |
| 10. Removing scratches. | 25. Servicing under warranty of factory. |
| 11. Retouching paint. | 26. Panel or commercial job where delivery is necessary to chassis body concern and return. |
| 12. Removing squeaks. | |
| 13. Removing rattles. | |
| 14. Tuning motor. | |
| 15. Adjusting motor. | |

If any of these items listed are not interpreted to be included under paragraph (d) of Subsection 1, Subtitle B of Article IV, it is respectfully requested that immediate advice may be given so that the same may be deleted and specific instructions given all dealers under the Code of the Motor Vehicle Retailing Trade.

No specific mention is made of the advertising charge in Mr. Ammerman's reply to this communication in which he rules out some of the items listed under handling. Mr. Ammerman's letter follows:

For the reason that we are not quite in accord with all of the operations which you include as being within the interpretation of Article IV, Title B, Section 1, of the Code of Fair Competition for the Motor Vehicle Retailing Trade, we are giving you in the following what in our judgment is included therein and covered thereby:

1. Handling.
Paragraph (d), clause (w)—To the average cost of transportation, as defined in paragraph (c), there is to be added the cost of unloading and transferring to the dealer's place of business in so far as such cost is actually incurred by the dealer.

Issues Still Code Ruling

by Don Blanchard
Editor, Automotive Industries

Code authority also makes interpretation permitting three per cent cut in dealer discount on sales to quantity buyers—Part-time salesmen are ruled out

2. Assembling.
Paragraph (d), clause (x)—The attaching of any equipment or accessories or parts of any description which are included in the factory F.O.B. list price which are not attached to the car when the car is delivered to the dealer.
3. Conditioning.
Paragraph (d), clause (y)—All testing and inspection prior to delivery of the car to the purchaser and the correction of any substandard condition found in such testing or inspection; provided that such substandard conditions are not the result of accident, neglect or abuse by the manufacturer or the dealer, or its or his employee or employees; and all washing and polishing and the supplying of such oil, grease and gasoline as are required in preparing the car for delivery to the purchaser.
4. There are no apparent existing questions as to definitions or interpretations of Article IV, Title B, Section 1; paragraphs (a), (b), (c) and clause (z) of paragraph (d), and we are passing them without further mention.

In general, we do not construe Section 1 to include, any charges which represent part of the dealer's general cost of doing business, or, any charges imposed by the manufacturer which in effect represent a decrease in the discount allowed a dealer by the manufacturer.

Specifically, we do not construe paragraph (d) of Section 1 to include charges for any of the following items:

- | | |
|--------------------------------|--|
| a. Fitting carpets. | f. New material |
| b. Changing wheels. | g. Servicing after delivery. |
| c. Changing tires. | h. Delivery to body builders and return. |
| d. Changing defective fenders. | |
| e. Overhead on labor. | |

Commenting on the foregoing letter, the Dealer Code Authority says:

The National Recovery Administration does not deal with the mechanics of cost as set forth in dollars and cents. The items which may be charged by a dealer and for which his COST properly substantiated from his record may be added to the list price are herewith set forth:

(Then follows a list of the items in the Code Authority's letter to Mr. Ammerman, those to which NRA took exception being omitted.)

Other charges added by a manufacturer to the F.O.B. list price of a motor vehicle, which in effect decrease the discount allowed a dealer by the manufacturer, may also be added to the delivered price.

There seems to be some conflict between the Code Authority view as expressed in the preceding paragraph and that expressed by the paragraph in the Ammerman letter which we have italicized. Mr. Ammerman does not construe Section 1 to include "any charges imposed by the manufacturer which in effect represent a decrease in the discount allowed a dealer by the manufacturer." The Code Authority, on the other hand, states that charges the factory adds to the list price which in effect decrease the discount may be added to the delivered price.

Mr. Ammerman's letter makes no reference to the Code Authority contention that "National advertising paid for by manufacturer and charged to the dealer" should be included in the delivered price unless this point is covered by the italicized paragraph, or unless it is to be inferred that lack of reference to it means that it may not be included.

There is possibly also a reference in the italicized paragraph to the fact that some dealer contracts require that the advertising charge be absorbed by the dealer, while contracts written by other factories either make no mention of how the advertising charge is to be handled or state specifically that it may be added to the list price. In the former case the advertising charge in effect is a decrease in the dealer discount and hence it would not seem permissible to add it under Mr. Ammerman's interpretation. In the latter case it could be held that the advertising charge was not deductible from the dealer's discount and hence could be passed on. Another aspect of the situation is that in some instances the advertising charge is made with the understanding that it will be used for local advertising.

In such cases the charge could hardly be regarded as for national advertising and hence not eligible under the interpretation given in the Code Authority's letter to NRA.

The interpretation of assembling in Mr. Ammerman's letter might be taken to mean that only the installation of accessory items included in the list price could be put into the delivered price. Inasmuch as bumpers, spare tire and tube, and tire lock, are not included in the list price, by inference it would seem that the cost of installing them might not be included in the delivered price. On the other hand, the Code Authority

(Turn to page 167, please)

Photo-Electric Cell Used with Diaphragm in New Labarthe Indicator

AS mentioned in the first article in this series, which appeared in *Automotive Industries* of Dec. 9, 1933, the Labarthe indicator is based on the principle that a parallel beam of light, when reflected by a convex mirror, is spread, and therefore reduced in intensity, according to the degree of convexity of the mirror. The mirror is constituted by a pressure diaphragm subjected to the gaseous pressure in the combustion chamber. A sectional view of the diaphragm holder or diaphragm chamber is shown in Fig. 1. The diaphragm itself is made of a high-nickel-alloy steel (elinvar), and is 0.040 in. thick and about 5/16 in. in diameter. It is clamped in a fitting which can be screwed into a spark-plug hole. If the cylinder to be indicated has only a single spark-plug hole the diaphragm is combined with the spark plug, as shown in Fig. 2.

The diaphragm is brought as close to the inner wall of the combustion chamber as practicable, so that the change in compression volume with

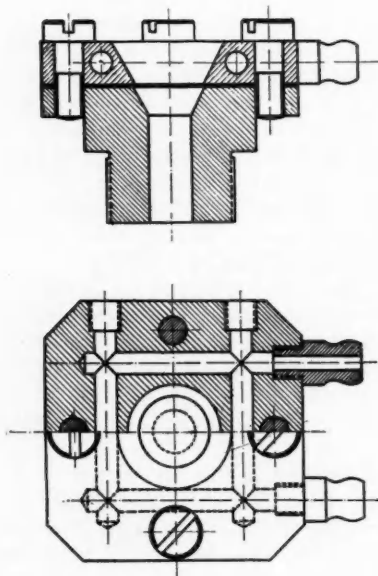


Fig. 1—Diaphragm chamber screwed into cylinder head, with water-cooling passages in the cap.

the fitting in place is negligible. To prevent any ill effects of the heat of combustion on the diaphragm, the fitting is water-cooled, drill holes for the circulation of cooling water being provided in the upper part or cap, as shown in the drawing. The relatively large thickness of the diaphragm (compared to its diameter) makes its natural frequency of vibration very high (more than 100,000 cycles per second) and practically eliminates interference between the free vibrations of the diaphragm and its forced vibration due to variations in gas pressure, and M. Labarthe states that he has succeeded in taking diagrams on two-stroke engines at 7,000 r.p.m. which show no fluctuations in the expansion line.

A tungsten-filament electric bulb supplied with direct current serves as a source of light and is provided with a lens which condenses the rays from the filament and illuminates the entire surface of the diaphragm uniformly. The steel diaphragm is chromium-plated on both sides—on the inside to protect it against any corrosive action of the gases of combustion, and on the outside to give it reflective properties. The diaphragm reflects the light onto the sensitive surface of a photo-electric cell, which latter is mounted—at a suitable distance from the diaphragm—on the same support as the source of light. Any slight variation in the convexity of the diaphragm, due to changes in pressure in the combustion chamber, varies the divergence of the reflected beam, thereby varying the flux of light falling upon the photo-electric cell, and the current generated in the latter. The detail design of the instrument has been so worked out that a variation of 5 per cent in the luminous flux produces a 2 3/4-in. motion of the spot of light parallel to the pressure scale, and that the electric current sent out by the photo-electric cell is directly proportional to the cylinder pressure.

The photo-electric cell used is of the vacuum type, which has the advantage over the gas-filled type of being practically without inertia and quite stable. To prevent any influence of engine vibration on the diagrams obtained, the source of light is

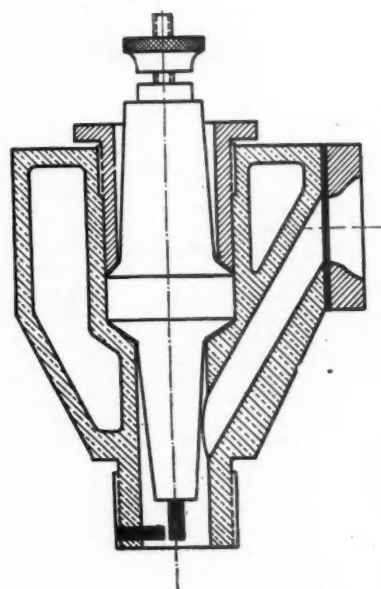


Fig. 2—Diaphragm chamber combined with spark plug.

so mounted that the cross-section of the reflected beam where it strikes the photo-electric cell is larger than the cathode area. Any slight displacement of the beam relative to the cathode then has no effect on the luminous flux received by the cathode. All that is necessary is to see to it that even at the maximum amplitude of vibration the entire cathode is covered by the reflected beam.

A single amplifying bulb with indirectly-heated filament is used. It is mounted on an "antimicrophonic" support, to prevent the transmission of floor vibration to the grid. The magnifying tube, moreover, is arranged in such a way that only the straight-line portion of its characteristic is used for magnifying purposes, with the result that there is strict proportionality between input and output potentials.

The cathode-ray oscillograph used consists of a glass bulb with a flat bottom, filled with argon gas under low pressure, within which there is a small recipient of metallic oxides. The filament being heated by a suitable current (0.8—1.1 amps.), electrons

d with Mirror e Indicator

by P. M. Heldt,
Engineering Editor, Automotive Industries

The second of a series of articles describing the latest developments in the high-speed engine indicator field

are emitted by it which escape through an orifice in a circular screen electrically connected to one end of the filament. The small recipient communicates with the interior of the glass bulb proper through a small platinum tube serving as anode, which is referred to as an "electron gun." A suitable difference of potential having been produced between the anode and the screen, the velocity of the electrons is increased, and a narrow stream of these electrons hits the bottom of the bulb, covered by a fluorescing material, and produces a spot of light thereon.

Cathode rays (streams of electrons) thus produced are deflected from their normal direction when subjected to either a magnetic or an electrostatic field, the deflection being proportional to the potential applied, and the sensitiveness inversely proportional to the anode potential. To produce a pressure diagram on the fluorescent screen, a pair of deflecting plates is placed above and below the path of the stream of electrons through the tube, these plates being electrically connected to the output terminals of the magnifying tube which magnifies the voltage of the photo-electric cell. The change in potential of these plates deflects the cathode-ray beam vertically in direct proportion to potential variations, and therefore in direct proportion to pressure variations in the engine cylinder.

To obtain a pressure-volume diagram, it is necessary to deflect the beam also in the horizontal plane in proportion to the volume changes of the combustion chamber. These volume changes, naturally, must first be transformed into proportional electric potential changes. To produce a mechanical movement or other physical effect directly proportional to the change in volume of the combustion chamber, use is ordinarily made of a crank-and-connecting-rod mechanism

having the same ratio of connecting-rod length to crank radius as the crank mechanism of the engine. This sort of mechanism is open to several objections when made to a small scale and required to operate at high speeds. Wear at the crankpin and resulting back lash will result in inaccuracies, and it is difficult to balance the motion of the mechanism.

Deflection of the beam of cathode rays parallel with the axis of abscissas is obtained in substantially the same manner as its deflection parallel with the axis of ordinates. In the first place, the amount of light allowed

to fall upon the photo-electric cell is varied in accordance with the change in combustion-chamber volume; the output potential of the photo-electric cell is magnified by the same type of magnifying tube as previously described, and the magnified potential is applied to the plates on opposite sides of the beam of cathode rays.

To vary the luminous flux falling upon the photo-electric cell in strict proportion to the changes in combustion-chamber volume, light from a luminous source is passed through a narrow slot and this slot is partly closed off by a revolving eccentric disk

Fig. 3—(Right) Shutter which uncovers a slot in proportion to changes in compression-chamber volume.

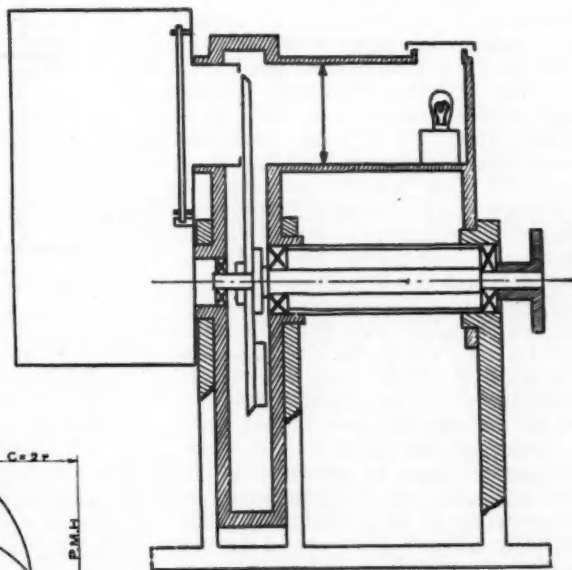
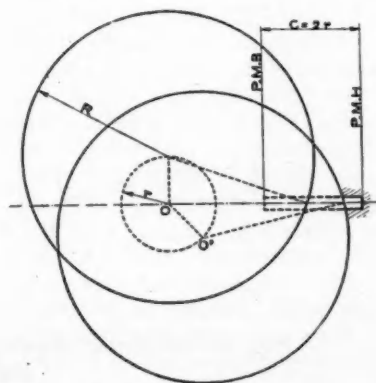


Fig. 4—(Left) Graphical proof of fact that area of slot exposed is proportional to combustion-chamber volume.

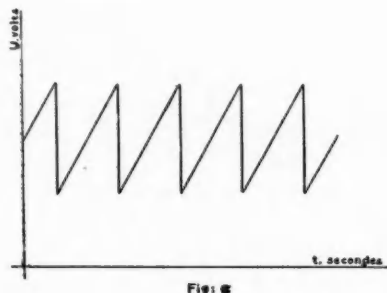


Fig. 6—Oscillating voltage represented by saw-tooth line.

as shown in Fig. 3. Care is taken that the luminous flux is of uniform density over the whole length of the slot. It is then only necessary that the ratio of the radius of the disk to its eccentricity be the same as the ratio of the length of the connecting-rod to the crank radius, in order that changes in the exposed area of the slot may be in proportion to changes in combustion-chamber volume.

Here, again, care must be taken that the amount of light falling on the sensitive surface of the photo-electric cell is not varied by vibrations of the apparatus. The cross-section of the beam of light, therefore, is made smaller than the sensitive area of the photo-electric cell, so that even at the extreme amplitude of vibration all of the light passed by the slot falls upon the sensitive surface of the cell. This permits of insulating the box containing the photo-electric cell and the amplifier tube from the mechanism which opens the slot in direct proportion to the piston movement. That rotation of the eccentric disk gives the same variation in the exposure of the slot as a crank mechanism with the same ratio R/r is proven graphically in Fig. 4, where P.M.H. represents the top dead center and P.M.B. the bottom dead center. The only deviation from theoretical equality is that the eccentric disk does not cut off the light squarely across the slot. The point on the circumference of the disk which is on the longitudinal center line of the slot is in the theoretically correct position, and a line transversely across the slot through this point indicates the limit to which the slot should be exposed. This line forms with the circumference of the disk and the edges of the slot two triangles, one of which adds to and the other detracts from the exposed area of the slot. If the two triangles were of equal area, the exposed area of the slot would be theoretically correct; since one of the triangles has a convex side and the other a concave side, they are not; but with a narrow slot the difference in their areas is absolutely negligible.

The apparatus described in the foregoing serves to generate two electric potential waves which vary with the pressure in the combustion chamber and with the volume of the combustion chamber, respectively. One of these pressure waves is impressed upon

the horizontal and the other on the vertical deflection plates in the cathode-ray oscillograph, and the spot of light on the fluorescent plate of the oscillograph then describes the familiar pressure-volume diagram. The term "pressure eye" has been applied to the assembly comprising a light source, photo-electric cell and amplifier, while the assembly of light source, shutter, etc., is known as the "volume eye."

A good idea of the complete outfit may be obtained from Fig. 5, which shows it in diagrammatic form. At the top is shown the engine cylinder with a pressure diaphragm in its head. A beam of light from a luminous source is thrown onto the diaphragm after being condensed through a lens, and is reflected onto a photo-electric cell. From the terminals of this cell connection is made to an amplifying tube shown centrally at the right, and the output terminals of the amplifying tube connect to the horizontal deflecting plates in the cathode-ray oscillograph shown at the bottom. The mechanism intended to vary the strength of a beam of light in proportion to increase in combustion-chamber volume is shown connected to the crankshaft. Output terminals of the photo-electric cell which is illuminated by this beam of light are connected to an amplifying tube to the right of it, and the output terminals of the latter tube connect to the vertical de-

flecting plates in the cathode-ray oscillograph.

To produce "pressure-time" diagrams it is necessary to generate a voltage which increases uniformly with time and then drops instantly to its initial value; in other words, an oscillating voltage represented by a saw-tooth wave (Fig. 6). This saw-tooth-shaped potential is obtained by means of a "relaxation oscillator" consisting of a condenser which is charged at a constant rate by a screen-grid tube of variable drop and which is discharged periodically by a gas-filled hot-cathode tube.

A circuit diagram for one form of "relaxation oscillator" is shown in Fig. 7. C is a condenser whose capacity can be varied within wide limits. T is a voltage-regulating tube which is connected in circuit with a battery, B_1 , of a maximum of 135 volts. A battery, B_2 , of perhaps 300 volts, is connected across the condenser, C, and across the tube, T, and the battery, B_1 , in series. Connection to the deflection plates in the cathode-ray oscillograph is made as shown.

Tube T has a certain "break-down" voltage which is less than the voltage of battery B_2 . Suppose that the circuit through battery B_2 has been open and is being closed. For a short time the condenser, C, absorbs a heavy current, while its charge and difference of potential are being raised, most of the voltage of battery B_2 during this

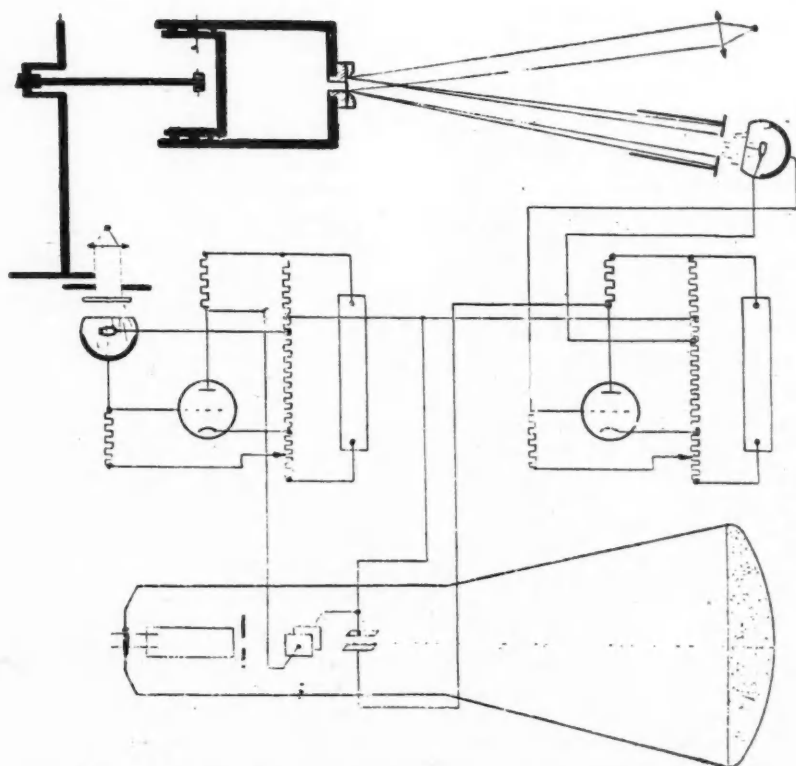


Fig. 5—Schematic drawing of Labarthe photo-cathodic indicator.

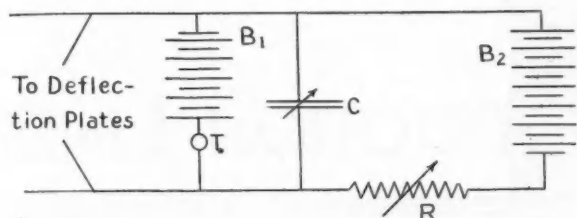


Fig. 7 — Circuit diagram of retardation oscillator.

time being absorbed in the resistance, R . The voltage of the condenser during this period increases according to the equation

$$V_c = V_2 \left(1 - \frac{t}{e^{RC}} \right),$$

where V_2 is the voltage of battery B_2 ; e , the base of the Napierian system of logarithms; t , the time since the closing of the circuit; R , the resistance, and C the capacity in the circuit of battery B_2 . The voltage of condenser, C , increases with time somewhat as shown in Fig. 8. By using only a small portion of this voltage-rise curve (at the lower end), the voltage rise will be in direct proportion to time, or, at least, the deviation from the straight-line relation will be negligible. By using a battery voltage, B_2 , much higher than the breakdown voltage of tube T , operation is confined to this portion of the voltage curve.

As soon as the voltage of condenser C reaches the breakdown voltage of the tube, a discharge takes place and the voltage of the condenser drops to that of battery B_1 . Then the voltage of the condenser builds up again, in

direct proportion to elapsed time, and the condenser discharges once more. The voltage on the deflector plates is at all times that of the condenser, since these plates are connected directly across the condenser. The changes in voltage on the deflector plates are then as shown by the sawtooth line in Fig. 6.

The problem now arises of making the cycle of this oscillating voltage equal to the cycle of the engine to be indicated. It can be seen from the equation for the voltage rise of the condenser that the rate of rise depends on the product of the resistance and capacity in circuit, and the cycle period therefore can be varied by changing the values of capacity C and resistance R .

In the Labarthe indicator synchronization of voltage oscillations with engine cycles is achieved by applying a small voltage to the grid of the voltage-control tube, this voltage being derived from the volume amplifier. The grid voltage then begins to rise with the beginning of the piston stroke, and the rise of the potential on the time-deflection plates likewise, which is what is required.

Instead of having the period of oscillation of the deflection-plate voltage equal to one engine cycle, it may be made equal to a number of cycles n . In that case, n successive engine cycles are depicted on the screen of the oscillograph at the same time.

M. Labarthe points out that pressure-time diagrams may be traced by means of his indicator also by the use of a mechanism similar to that incorporated in the "volume eye." Suppose, for instance, that the photo-electric cell is being illuminated by parallel rays passing through a narrow slot. If this slot is masked by means of an opaque disk revolving at engine speed, the periphery of the disk having the form of an Archimedian spiral, then the amount of light falling on the photo-electric cell varies in direct proportion to time, and a sawtooth voltage wave is generated. The only reason this simple mechanism is not being made use of is that it does not permit of an instant changeover from the setting for a single diagram to that of a series of diagrams.

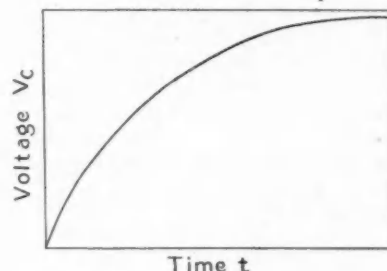


Fig. 8—Rise of condenser voltage with time.

Army Air Corps Writes "Finis" on Liberty Engine's Career

AN order issued by the chief of the Army Air Corps recently, prohibiting major overhauls to Liberty aircraft engines, brings to a close the history of this engine, development of which probably was the greatest American contribution to mechanical equipment used in the World War.

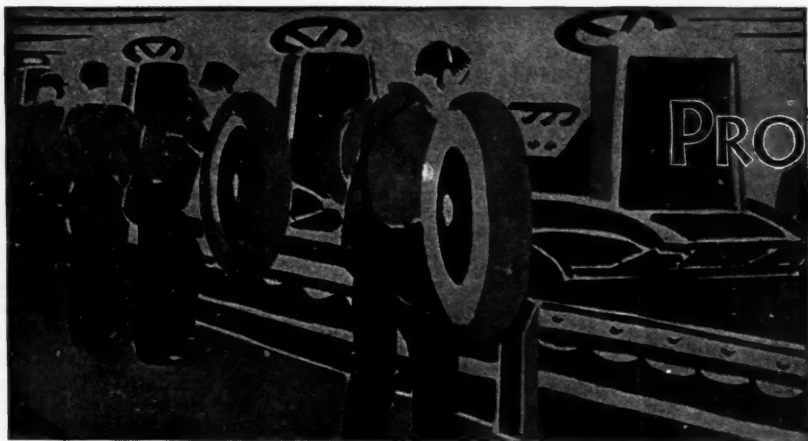
The Liberty engine was designed by Col. J. C. Vincent, now vice-president in charge of engineering of the Packard Motor Car Co., and Col. E. J. Hall, then a member of the Hall-Scott Company, a Pacific Coast firm engaged in the manufacture of internal combustion engines. Both had had previous experience in the design of aircraft

engines. Messrs. Vincent and Hall met for the first time at the New Willard Hotel in Washington, D. C., on May 29, 1917. They went to work immediately on layout drawings for a new "U.S.A. standardized line of aircraft engines," and six days later, on June 4, they appeared before a Joint Committee of the Army and Navy and the Aircraft Production Board, at which they exhibited the finished drawings. The name "Liberty" was applied to the engine by General Taylor at one of the meetings of the Aircraft Production Board, and this name stuck.

The first engine built was of eight-cylinder type and gave some trouble from excessive vibration.

All engines built in regular production were 12-cylinder engines, and that this 12-cylinder model represented a great engineering achievement for the time is probably shown most conclusively by the fact that it has been retained in service until now, more than 15 years after the end of the war.

Liberty engines were built in large numbers during the war by Packard, Ford, Leland and Marmon. After the war they were used in civil aviation, and the first airplanes carrying mail across the Continent were powered by them. They also formed a model on which further progress of aircraft engine design in this country was based.



PRODUCTION LINES

Bragging

Excuse, please, if we brag. But we visited a plant the other day and had occasion to check up on their rack of technical publications. We weren't represented there, and d'd we feel out of sorts! Wait—why weren't we there? Well, according to the man in charge, they can't keep *Automotive Industries* on the rack because it disappears in the engineering department. After the depression is over they may have to buy enough copies to go around.

No Doubt

Heald showed us some figures dramatizing the advance that has been made in manufacturing technique. Take precision grinding. In 1922, not so long ago, an internal grinder producing work with a tolerance of 0.001 in. at the rate of 20 pieces an hour was the wonder of the time. Now a Heald internal grinder, which, by the way, will be announced within the month, will deliver work automatically with a tolerance of 0.0003 in. at the rate of 100 per hour.

Knee Springs

Much excitement now about the production of heavy coil springs for independent suspensions. In at least one case that we know of, the material specifications are in a constant state of flux. Right now they are selecting a special analysis that should resist scaling in heat treatment. Incidentally, an expert in

this field confided to us that perhaps the large springs don't need a fine surface finish. Maybe that will be the next development.

More Diesel

A prominent truck producer around Detroit is closely approaching announcement of a Diesel line. They have practically decided on a certain four and a six, but are also testing two other makes that have just come in the picture.

New Lining

Live-wire parts maker showed us a cylinder lining now under development being groomed for passenger car engines. It has some features which set it apart from anything built before. One thing about it is a centrifugally-cast bearing surface of a special alloy iron with a hardness of about 900 Brinell. Piston ring manufacturers please note.

Old Custom

Witnessed an old Stout custom during the Annual meeting in Detroit. Picture Bill Stout meeting an old friend. Do they shake hands? No! They rip off their neckties and exchange. Understand that's how Bill gets some of his Christmas ties, or vice versa.

Order Changeth

Starting as machine tool builders, those who have worked with auto manufacturers have become machine tool engineers. This was

impressed on us when we visited the Heald plant recently. So many jobs require special tooling, special heads, and even special machines that these people keep a huge engineering force going full blast on two shifts (NRA influence). Incidentally, with more specialization and less volume in machine production, we may look for higher prices. In other words, we must pay for engineering and consulting service rather than so much per pound.

Imagine That

Think external broaching has possibilities? There's one outfit who has worked out a set-up for broaching crankshaft pins, completing the entire operation from roughing to burnishing in one pass of the broach.

Worth Noting

How often do you find strong competitors in any new line of endeavor getting together in a common interest? You've got to hand it to the boys who are working out external broaching for you. These broach fellows have got together and instead of staging a bitter battle for supremacy, they match experiences and find mutual means of solving an important problem of the production industry.

Electric Melting

Here's a unique little magazine published monthly in the interest of those who use electric furnace irons and alloys. It's published by the Detroit Electric Furnace Co., and gives a monthly resume of news about electric melting, high strength cast iron, etc. In format, it is an illustrated compilation of extracts from every important trade magazine in various industries. Sub-

scription is free on request. Ask us for the "Monthly Digest of Electric Melting News."

About Face

You know how much time and effort has been spent in getting perfect static and dynamic balance of wheel and tire equipment. Well, take heart at what a knee action expert has found. He tells us that balance not only is unnecessary on a knee-action job, but some unbalance may be desirable to aid steering. Think that one over!

Color Lines

Statistics seem to have doomed black as a preferred auto body finish. But the evidence on the production line is quite to the contrary. The public, like your humble commentator, still prefers the sleek black. Of course, there's a reason. One version in Detroit, and it has a modicum of logic, is that bright colors are too conspicuous. It's so much easier to drive a black one around the alleys and by-ways without attracting attention—particularly from the wife.

Dinner Note

Clayt Hill was in fine fettle at the Detroit dinner. He gets our vote for a couple of things he said. One was to the effect that a certain high grade automobile brought out this year has a hood louver treatment patterned after a mouth organ.

Stepped Up

Perhaps one of the most dramatic features of the present comeback of the industry that supplies our bread and butter is what's happening at Cadillac. Can you imagine the Cadillac assembly line geared up to spout a finished car every six

In which we comment on things heard in Detroit and elsewhere between show time and the S.A.E. meeting

minutes? Well, it is, and we saw them rolling off. We suppose it meant a complete change in the gearing of the reduction units on the conveyor.

To Be Or Not

Is there going to be a machine tool exposition this year? Heard a lot about it the last two weeks. Some are eager to have one, others feel it ought to be held over another year. Our opinion doesn't count, but we know from what we've seen here and there that if there is a show, the machine tool people have a lot to be proud of.

Looks Good

An experimental car containing a new design of automatic transmission was stolen recently while parked in New York. The prominent parts maker who owns it regards this happening as a pretty good testimonial for the transmission as the thief was able to drive the car off without any instruction as to its operation. Incidentally the car was recovered six weeks later by the police.

Opportunity

Knee-action hasn't changed the problem of good wheel alignment at the factory. What we're thinking of is the opportunity for some progressive equipment builder to get

his wheel alignment stuff into automobile plants. Don't feel too complacent if you have installed a few because we were in a plant where a new machine already was being slated for retirement.

Hydro-Shift

Bullard has just brought out a really remarkable vertical turret lathe called the Hydro-Shift. As the name implies, the machine has a hydraulically operated gear shifting mechanism making it possible to change table speeds while the machine is in full operation. It's a little too heavy a job for automotive production starting as it does with a 56 in. size machine, although it looks like a natural for some of the molds being built by the tire makers. The machine is extremely rigid and capable of utilizing cemented-carbide tools to their limit.

Another Ride

Well, we had a ride in another Diesel-powered truck. This one was equipped with the engine of which Waukesha is so proud. They claim all kinds of performance and economy. About time everybody realized the Diesel drive is gaining plenty of momentum.—J. G.

The 16th Annual Statistical Issue Is About to Appear

THE Sixteenth Annual Statistical Issue of *Automotive Industries* will be published on Feb. 24. It can be said, with what is hoped is not an unbecoming degree of positiveness, that the 1934 edition will be a worthy successor to its outstandingly useful predecessors. The work of collating and compiling the mass of thoroughly revised technical and commercial data which go to make up the issue has extended over the past several months. Charts and tables which have, year by year, recorded the engineering, production and marketing progress of the industry have been brought up-to-date. New material has been added to meet the new needs of executives, engineers, production men, salesmen and statisticians within the industry.

As a casually selected example of this new information, the concise tabulations of indices of automobile employment, wages and the cost of living may be pointed to as particularly pertinent and important in these days of NRA.

The increasing importance of the

Diesel engine in automotive design is recognized, and more complete details of the features of this type of engine, gathered from American and European sources, have been incorporated in the specification section.

Augmenting the complete mechanical details of passenger cars, trucks, buses, tractors, airplane engines, stock engines and component parts are the specifications of passenger cars manufactured in England, France, Germany, Austria, Hungary and Italy.

Figures on the dollar volume and unit volume of cars, trucks and automotive parts exported from the United States to the various continents of the world have been compiled. The trend of the export market is shown in tabular form.

The fact that the Annual Statistical Issue of *Automotive Industries* has found and maintained for itself a place high in the esteem of

those who profit by its practical usefulness and continuing day-to-day value is a source of much satisfaction. Expressions of appreciation for the contribution to the reference literature of the industry, which has been made by each issue as it has appeared, have been both numerous and flattering and have consistently strengthened the belief of the editors that these issues adequately meet a definite need and effectively render a service which is unique.

In the sixteen years during which the Statistical Issues have been published their value has been steadily augmented by accumulating data. The tabulations extend over lengthening periods as authentic automotive statistical history is recorded. The comprehensiveness of the 1934 edition of this factual handbook of the industry is shown by the partial list of subjects covered which is given below.

Some of the Data That Will Be Found in the 1934 Statistical Issue

Registrations:

- 1933 World Registrations of Motor Vehicles
- U. S. Motor Vehicles, Taxes paid by
- U. S. Motor Vehicle Registrations by Years
- U. S. Motor Vehicle Registrations by States
- World Registrations by Countries

Production

- Canadian Production by Years
- European Production by Years
- U. S. and Canada Production by Years
- Passenger Car Production by Leading Manufacturing Corporations
- World Car and Truck Production
- Passenger Car Production by Wholesale Price Classes
- Truck Production by Capacities
- Motor Vehicles Junked
- Production by Number of Engine Cylinders
- Passenger Car Production by Price Classes
- Tire Production
- Passenger Car Production by Body Types
- U. S. Airplane Production by Years
- U. S. Airplane Engine Production by Years
- U. S. Production and Sales of Airplanes by Types
- Indices of Automotive Employment and Wages

Marketing Data:

- New U. S. Registrations of Passenger Cars with Estimated Dollar Volume by
- Retail Price Classes
- New Car Domestic Sales by Makes

New and Used Cars

- Financed Sales, Wholesale and Retail
- Sales Outlets and Passenger Car Sales by States
- New Motor Vehicle Sales per Dealer
- Average Wholesale Price of Passenger Cars and Trucks

Exports and Imports:

- Imports of Motor Vehicles by Years
- Ratio of Foreign Sales to Production by Years
- Foreign Sales of American Motor Vehicles by Years
- American Passenger Car Exports by Price Classes
- American Truck Exports by Capacities and Continents
- U. S. Exports of Parts and Accessories by Products and Continents

Specifications:

- American Passenger Car Engines
- American Passenger Car Chassis
- American Agricultural Tractors
- American Gasoline Truck Chassis
- American Gasoline Bus Chassis
- American Stock Engines
- American Taxi Cabs
- Automotive Diesel and Heavy Oil Engines, Domestic and Foreign
- British and Continental Passenger Car Specifications
- American Stock Rear Axles
- American Stock Gear Sets
- American Stock Steering Gears
- American Stock Front Axles
- American Stock Clutches
- American Stock Airplane Engines

Some Delivered Price Issues Still Unsettled Despite New Code Ruling

(Continued from page 159)

states, in comments following the Ammerman letter, that these installation costs may be added.

Another question that has arisen is, "What are accessory list prices?" For example, a factory ships with each new car a group consisting of bumpers, spare tire, tube and lock, billing the group at a flat sum of, say, \$20. If these same items are purchased through the parts department at list prices, the total cost might be something over \$25. The code says that accessories must be sold at list prices. Which prices are list?

Still further clarification of these and other points is needed to end present uncertainty. It is reported that conferences on delivered prices were in progress this week between the dealer Code Authority and individual factories, and these negotiations are expected to settle the points at issue. Incidentally, in clearing up the situation and in securing uniformity of delivered prices on each line of cars in local marketing areas, it is understood that the factories will handle the matter individually and not as a group.

Fleet Discounts

Turning to fleet discounts, the ruling on them follows closely that issued early in January. Here is the new interpretation:

The Code of the Motor Vehicle Retailing Trade is a retail code and motor vehicles may only be sold at the retail price provided in Article IV, Subtitle B, Section 1, of the Code. The Code of the Motor Vehicle Retailing Trade does not cover a manufacturer, and a manufacturer may sell motor vehicles to such persons, firms, or corporations as it, the manufacturer, may determine. Contractual relations of a manufacturer with his dealer may or may not permit recognition of quantity discounts for quantity purchases. A dealer, however, is not required to accept a used car at the direction of the manufacturer at other than the price determined in the Official Guide of the dealer. In order for the dealer to deliver motor vehicles under contractual arrangements of the manufacturer, the following plan has been approved by the National Control Committee. This plan permits the dealer to deliver motor vehicles without violating the Code of the Motor Vehicle Retailing Trade.

All sales are to be made by and through dealers at

regular delivered prices, and dealers may handle any used car that may be involved at the regular Official Book price.

On such deliveries made to quantity purchasers it is understood that upon such cars delivered, the factories, by contractual arrangement with the dealers, will bill such cars to the dealers at 3 per cent less than the regular discount.

If delivery is made from dealer's own stock, it shall be reported and the factory may change its billing price on such car to conform to the above.

If it develops that the purchaser does not qualify as a quantity purchaser, the regular discount will be restored by the factories to the dealers who made deliveries to such purchaser.

Quantity purchaser is one who established the fact that his total purchases of new cars in any current and consecutive 12 months' period has reached a volume of \$15,000, exclusive of transportation, delivery and handling charges, tax on price of equipment, bodies and accessories, not included in standard factory specifications.

It is understood that only company owned or company controlled cars are to be considered in the total determining a quantity purchaser.

Despite the preamble to this ruling, in which it is asserted that the dealer code does not regulate manufacturers, some aspects of this ruling appear to be in effect regulations of factory practices.

Part-Time Salesman

Another ruling of some importance is that there are no part-time new and used car salesmen in the Motor Vehicle Retail Trade. This rules out commissions to "tipsters" and "bird dogs," such as filling station operators, barbers, owners, etc. Apparently the theory behind it is that it would be impossible to distinguish between legitimate commissions to these classes and gratuities, and also it would complicate the enforcement of the code requirement that full-time salesmen receive guaranteed drawing accounts. Despite these enforcement difficulties, the code itself makes no reference to part-time salesmen, simply saying that full-time salesmen shall be paid certain guaranteed weekly drawing accounts.

Airplane Cowl Experiments Lead to Higher Speeds and Lower Engine Temperatures

EXPERIMENTS conducted to reduce the drag and improve the engine cooling of planes fitted with N.A.C.A. cowling, were discussed in an S.A.E. Annual Meeting paper by R. B. Beisel, Chance Vought Aircraft Corp., and A. L. MacClain, Pratt and Whitney Aircraft Co. Mr.

Beisel said that the installation of the cowling on the plane used in the experiments reduced speed 11 m.p.h. and increased temperatures at the heats and bases of the radial cylinders by 62 and 52 deg. respectively. Following the introductions of baffling between the cylinders to

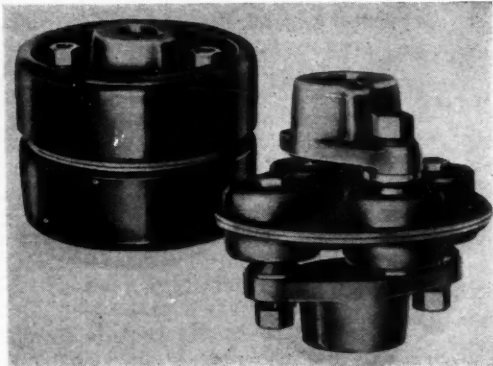
direct the air, higher speeds were attained with a reduction of 68 deg. in the head temperature and of 22 deg. in the base temperature. Further experiments resulted in the development of a controllable flap for the cowling which reduced the drag.

NEW DEVELOPMENTS

Automotive Parts, Accessories and Production Tools

Morse Has Improved Flexible Coupling

The Morse Chain Company, Ithaca, N. Y., and Detroit, Mich., division of Borg-Warner Corporation, announces an improved flexible coupling, of



which the flexing member is a complete unit comprising four molded non-cold-flow rubber trunnion blocks of special design spaced 90 degrees apart and set, under pressure, into a

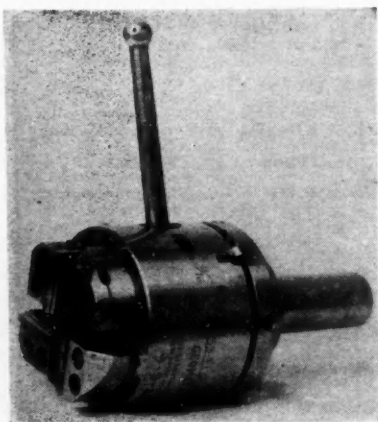
two-piece riveted steel housing. The rubber trunnion blocks are provided with steel cores or bushings, also set under pressure into the blocks.

Two diametrically opposite blocks are bolted respectively to the armed steel driving and driven flanges which

are mounted on the shafts to be connected. There is no metal contact between the flanges, the only contact between the two shafts being through the flexible rubber bushings or blocks.

Takes Either Circular Or Tangent Chasers

A combination die head hardened and ground throughout, that will take either circular or tangent chasers interchangeably, now supplements the line of The Geometric Tool Co., New Haven, Conn. This combination principle is available in both rotary and stationary heads.



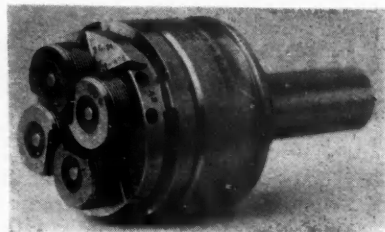
Geometric stationary die head

Chasers and holders can be extracted from the head without its removal from the machine, ground and set, and replaced in the minimum of time required for these close exacting operations. Chasers can also be removed from the holders and accurately ground in a new Geometric fixture which is adapted for use on any universal surface grinding machine. The circular chaser has a series of serrations for coarse adjustment, but any desired degree of adjustment between serrations is also provided.

The tangent chaser has an equally minute adjustment. In resharpening, only enough metal need be ground off of either type of chaser to leave a clean cutting edge, which greatly lengthens its life. A chaser holder support made rigid by heavy "T" slots and broad reinforcing wings; a post support for the circular chaser which is integral with the holder; and an improved four-point bearing for the tangent chaser, are additional features.

Front plates that help to form the "T" slots which support the chaser holders are removable and replaceable in case of wear. Broad locking surfaces that hold the chasers in cutting

position, positive tripping and adjusting means, and simple provision for

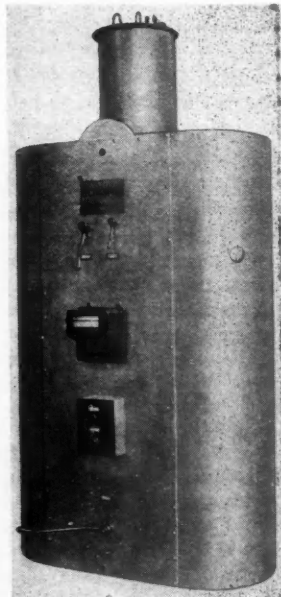


Geometric rotary die head

disassembling the head for cleaning are features of former design that have been retained in the new line.

Dries Air Or Gas Automatically

Pittsburgh Lectrodryer Corp., Pittsburgh, Pa., has brought out the Lectrodryer, which is designed to dry air or gases without the use of corrosive chemicals or rotating machine elements. Fully automatic units will deliver gases dried to any dewpoint below normal continuously. In addition to single and dual units, electrically



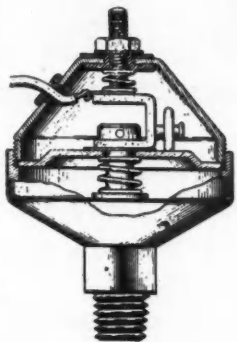
operated or for fuel-fired reactivation built in 500 to 10,000 cu. ft. per hour capacity, there is a laboratory unit having a flow rate of only 100 cu. ft. per hour.

The Lectrodryer has wide application, and among other things can be used for partially or completely freeing of moisture the atmosphere for annealing furnaces; to prevent precipitation of moisture, in storage rooms, such as tool rooms; also as a device to maintain room atmosphere at any given dewpoint.

Its principle is described as an "activated alumina system" which can be reactivated electrically from a 110-volt source.

Chicago Safety Devices Announces New Oil-Eye

Chicago Safety Devices Company, Chicago, announces an improved Oil-Eye, adjustable automatic oil-pressure signal. The new Oil-Eye consists of a sealed operating unit and special light for the instrument panel. In this unit, pressure of the engine lubrication system is balanced against a compression spring by means of a metal



diaphragm. Loss of oil or thinning of oil results in unbalance, which in turn closes the circuit that lights the red lamp on the instrument panel.

Oil-Eye gages always have been adjustable, that is, they could be set to "flash" at any desired point or level. In the new design this "setting," either for point of action or to compensate for differences between cars, is done by turning a set-nut at the top of the unit.

Planigressive Multi-Speed Reducers

The Davis & Thompson Co., Milwaukee, Wis., has developed a Planigressive multi-speed reducer in connection with their regular line of motorized Planigressive speed reducers. This makes possible the use of high constant speed motors instead of multi-speed motors.

This multi-speed reducer is built in two, three or more specified speed reductions with a range of from 2.66 to 1 to 20 to 1 ratio which coupled with additional speed reduction provides a range that meets most requirements.

The advantage of this type of multi-speed reducer, according to the manufacturer, is that owing to its planetary construction, all gears being in mesh at all times, it can be shifted to any of its various speeds while running under load, running idle or when standing idle, by simply shifting the lever to the speed required. This unit is made integral with a motor of any make either A.C. or D.C. and also with an input shaft independent of the prime mover.

The units can be obtained in sizes of from $\frac{3}{4}$ hp. to 10 hp. inclusive either horizontal, vertical or right

NEW DEVELOPMENTS

Automotive Parts, Accessories and Production Tools

angle drive, and larger sizes can be built to meet the customer's specifications. It can be used on machine tools, conveyors, agitators and special machinery requiring speed changes and direct motor drives. It is also adaptable for use on hazardous applications using explosion-proof motors and in wet, damp places using drip-proof motors.

The Planigressive Reducer Sales Co. of Milwaukee, Wis., are the national distributors for this reducer.

Pallet Handling Tilting Fork Truck

The Type "T.T.T." tilting telescopic fork truck, the latest addition to the Mercury line of electric and gas powered lift trucks, is announced by the Mercury Manufacturing Company, Chicago, Ill. The feature of the new truck is its simplicity, due to the use of the Mercury hydraulic lifting and tilting system, the unit drive axle and drive motor assembly, and the design of the welded frame and upright members.

The fork elevating system, as in Mercury platform lift trucks, is by means of a motor driven gear pump



which actuates the hydraulic ram carrying two large-diameter sheaves over which the double lift cables operate. The fork tilting action is by two double acting hydraulic cylinders actuated by the same oil pump and controlled by a separate oil valve.

The telescopic tiering fork truck illustrated has a carrying capacity (for 36-inch platen) of 3600 lbs., and may be provided with forks of length,

width, and thickness to suit the load. The forks are capable of tilting forward 15 degrees and backward 2½ degrees. Maximum lifting height of forks is 109 inches, and the clearance height of the uprights with the forks lowered is 83 inches. This clearance permits operation through doorways 7 ft. high or higher, and the telescopic lift allows piling of uniform pallet loads to a height of 18 feet. The outside clearance radius is approximately 74 inches, and the truck is capable of right angle piling from a 114 inch aisle.

Type "T.T.T." fork trucks will be available in a complete range of models, including tilting and non-tilting non-lift, high lift, and telescopic high lift models, with hydraulic tin plate clamp, ram, chisel, or any type of forks for pallet handling. Capacities range from 2500 lbs. to 4000 lbs.

Speed Nuts Cut Costs

Tinnerman Stove & Range Co., Cleveland, Ohio, has brought out a varied line of speed nuts which are said to be cutting assembly costs on sheet metal fastenings, such as fender and skirting subassemblies, and on miscellaneous parts, such as tail lamps, glove compartments, dash liners, name plates and upholstery.

Speed nuts are designed to replace the ordinary nut and lock washer, and are said to provide a more efficient and permanent means of assembly. In use, speed nuts are zipped over the threads of a machine screw or bolt, and with a turn or two of the screw driver locked securely in place under constant spring tension, eliminating any possibility of loosening due to vibration.

On the new Type B speed nuts, the corners of the nut itself are turned down to form small locking prongs which eliminate rotation of the nut during the tightening operation. A light pressure by the fingers is sufficient to hold the nut in place during tightening, thus eliminating spinning of the nut, particularly when used with an electric or mechanical power-driven screw driver, moreover eliminating the necessity for a wrench as is required with nuts and lock washers.

A.F.L. Charges of Auto Code Violation Regarded as Part of Unionizing Drive

Industry Will Make No Reply to General Charges Without Specific Proof—Collins Claims There Is No Shortage of Skilled Labor in Detroit—Production Strike Is More Remote

DETROIT—Because the charges against them were of a general nature without specific proof and because they are looked upon as a part of the unionization campaign being conducted in the motor car industry, automobile manufacturers will not reply to the accusations made last week by William A. Green, president of the American Federation of Labor.

However, they privately characterize as absurd the statement that they are attempting to evade the automobile code's provision for a maximum work week of 48 hours by paying their workers by check for the maximum legal period and then in currency for additional time. They say that no company, if it desired to work its men overtime, would adopt such crude tactics.

It is admitted that the maximum hours may have been exceeded in a few isolated instances because of the unfamiliarity of foremen and other minor executives with code restrictions, but these cases occurred without the knowledge of higher executives and were reported immediately to the Code Authority, as required by law.

Williams Collins, district organizer at Detroit for the American Federation of Labor, in a statement to a representative of *Automotive Industries*, declared that there is no shortage of skilled help in Detroit, as claimed by car manufacturers. The reason that employers give the impression that a dearth of skilled

workers exists is that they are refusing to take back men who have union affiliations. This policy is being applied to the general run of production men as well as skilled operators, charges Mr. Collins.

Using the so-called shortage as an excuse, manufacturers are importing workers into southern Michigan in violation of the agreement made recently with the NRA administration at Washington, asserts Mr. Collins. This agreement, approved by General Johnson, calls for an increase from 35 to 40 in the average number of

(Turn to page 178, please)

January Production Beats 1932 and 1933

NEW YORK—The January output of American motor vehicle manufacturers was placed at 155,000 cars and trucks in a preliminary report released by the National Automobile Chamber of Commerce. This output represented a 78 per cent increase over the previous month and 16 per cent increase over January, 1933. It also exceeded the output for January, 1932, by 26 per cent.

The estimate is based upon reports of factory shipments. A comparative summary follows:

January, 1934	155,000
December, 1933	87,307
January, 1933	133,402
January, 1932	123,075

G.M. Executives Reach Delivered Price Agreement with Dealer Code Authority

DETROIT, Feb. 8—At a meeting yesterday between executives of the General Motors Corporation, including W. S. Knudsen, R. H. Grant and M. E. Coyle, and the National Control Committee, Motor Vehicle Retailing Trade Code Authority, including F. W. A. Vesper and J. Reed Lane, Southworth and Brace, a definite agreement as to the manner of arriving at delivered prices was worked out. As the result of this cooperative action between representatives of dealers all points of difference as to the interpretation of the retailing code were settled. Under the agreement the major change in the delivered price set-up is a \$6 increase in the handling charge which will increase the price

to the buyer by a like amount.

Chevrolet delivered prices are affected therefore only to this extent, the handling charge being \$12 for all except rail shipment. Where shipment is by box car the charge is \$13.50. No charge for advertising is being included in the Chevrolet delivered price, since the \$6 per car charge for advertising is being expended locally in the dealer's own territory under the administration of the factory. The handling charge includes \$3.50 for conditioning, the low price being made possible by tuning of cars at assembly plants before delivery to dealers. The handling charge also includes a charge for inspection during the guarantee period, washing, gasoline, etc.

NEW

Nash Turning Out 100 LaFayettes Daily

RACINE, WIS.—The first shipment of LaFayette cars to dealers was made this week from the Nash-LaFayette plant at Racine. Actual production of the new Nash entry in the low price field began ten days ago, enabling the factory to start shipments at the rate of 100 cars per day. Preparations are being made as rapidly as possible to step up this rate of production.

Nine hundred men have already been added to the Racine plant payroll to take care of the present schedule of production. Another 900 men have been added to the Nash-Seaman body plant in Milwaukee, where bodies for the LaFayette are being built.

Reo Names Fitness As Chief Engineer

LANSING—Appointment of Ray J. Fitness as chief engineer of the Reo Motor Car Company, has been announced by Ray A. De Vlieg, works manager.

Mr. Fitness comes to Reo from Chrysler, where for the last three years he has been experimental engineer. In all, Mr. Fitness was associated with Chrysler Motors ten years and has seen 27 years service in the automobile business, having also been connected with Continental Motors, Studebaker and Dodge Brothers.

H. T. Thomas, veteran head of the Reo staff, will devote virtually all his time to the duties of chief research engineer.

Gasoline Consumption Near 1932 Total

NEW YORK—Gasoline consumption in the first eleven months of 1933 was but one-half per cent below the total for the corresponding period of 1932. The total for the period was 14,260,789,000 against 14,373,877,000 in the same period of 1932.

February Schedules Point to Total Output in Excess of 250,000 Units

Production May Exceed June, the Peak Month in 1933—General Motors Expected to Build 100,000, Chrysler 58,000 While Ford Aims for 75,000 Mark

by Athel F. Denham

Detroit Editor, Automotive Industries

Willys to Build 7,500 Model 77's

Bulk of Them Will Be Sold on Pacific Coast

TOLEDO—Court orders to start the Willys-Overland receivers on a program of making up to 7,500 Willys 77's and financing the operation through issuance of \$750,000 receivers' certificates were signed late Wednesday by Judge George P. Hahn, in Federal Court.

David R. Wilson, receiver, said orders for materials would be in the mails tonight and production would be under way in less than four weeks depending on deliveries of materials.

Charles W. Racine, special master, reported more than 1,000 claims by creditors had been filed with him aggregating more than \$12,000,000. This is exclusive of the \$2,000,000 plus interest owed under first mortgage lien to bondholders. They will receive \$500,000 by order of the court through sale of surplus machinery.

Yielding of the National Supply Co. on an asserted 35,054 mechanic's lien averted an objection to the court orders. Protection of the lien was arranged by agreement of attorneys at the signing of orders. The court was furnished lists of sales of cars and also of takers of the receivers' certificates.

Approximately 2,500 workers will be recalled to the Toledo plant when production gets under way, there will be employment for 600 in the Elmira, N. Y. plant, 600 in the Wilson Foundry & Machine Co., unit in Pontiac, Mich., and 250 in the assembly plant in Los Angeles, Calif.

A large share of the 7,500 cars to be manufactured will be sent to the Pacific Coast for assembly there.

Edgar Davies, Los Angeles, distributor, has been active in the negotiations here. He said he could sell all Willys 77's he could get delivery on.

Rapid gains in price of the Willys-Overland common shares in the last week has indicated possibilities of reorganization. The stock quoted at three cents a share rose to 49 cents in a few days.

DETROIT—According to present factory schedules, February production of cars and trucks for the industry should exceed the quarter million mark or more than the combined production for February, 1932, and 1933. Moreover, there is a good possibility that production will actually pass the peak month of last year, June, when some 260,000 units were produced by the industry. Present estimates place the total for the industry between 255,000 and 265,000, the largest single month's output since May, 1932.

Included in the totals are 100,000 units for General Motors, of which approximately 70,000 is credited to Chevrolet and 10,000 to Buick. Chrysler Corporation units should produce in the neighborhood of 58,000 units. Hudson has a production schedule of 14,000 for February and Ford has announced tentative schedule of 75,000 for the month.

Plymouth production for January totaled 17,545, or double January last year; 70,000 unfilled orders are re-

ported at hand at Plymouth. Dodge reports approximately 43,000 unfilled orders and January retail deliveries of 4700 cars and 2700 trucks. Dodge production at present is at the rate of 325 per day. Hudson-Terraplane production is at the rate of 400 daily and payrolls now total 11,000 men compared with 4600 a year ago.

Several of the newer cars are not in active production as yet, but will be shortly. Chrysler "Airflow" models are beginning to come off the line. New LaSalle should be in production before the end of the month. The new Reo six also should get under way by March 1. Hupmobile's new streamlined offerings should reach the assembly line around the first of the month also.

Graham received the largest single day's order in four years on Feb. 5 and on Feb. 1 its orders were 70 per cent greater than on the same date in 1933. Employment at the Graham plant is 72 per cent higher than a year ago.

Polk Puts 1933 U. S. Sales Gain at 36.2%

Domestic Business Totaled 1,739,633 Cars and Trucks

DETROIT—Total sales of new motor vehicles in the United States in 1933 were 1,739,633 units, according to R. L. Polk & Co.

The total compared with 1,276,812 in 1932. The increase of 462,851 units represented a gain over 1932 sales of 36.25 per cent.

Total new passenger car sales in 1933 reached 1,493,794, a gain of 36.25 per cent over the 1,096,399 new motor cars sold in 1932.

Total new motor truck sales in 1933 amounted to 245,869 units, a gain of 36.22 per cent over the 180,413 new motor trucks sold in 1932.

All figures are based upon official registrations reported in the 48 states and the District of Columbia, as compiled by the Polk organization. The final compilations showed that the proportionate gains in new motor cars and new motor trucks were almost exactly equal.

New passenger automobile sales in December totaled 58,624, a gain of 28.32 per cent over the 45,683 units

sold in December, 1932, but a drop of 37.75 per cent below the 94,180 units sold in November, 1933.

New motor truck sales in December amounted to 15,580, a gain of 63.62 per cent over the 9522 units sold in December, 1932, and a decrease of 16.64 per cent under the 18,691 units sold in November, 1933.

Production Delays Cut GM's January Volume

NEW YORK—With dealer new car inventories lagging far behind demand because of production delays, January deliveries of General Motors cars and trucks to domestic consumers hit a new bottom for the month with a total of 23,438 units, a decrease 54 per cent from the January, 1933, total of 50,653.

Sales to U. S. dealers during the month amounted to 46,190 against 72,274 last year, a loss of 36 per cent. Comparing dealer purchases with deliveries an increase in field stocks of 22,752 during the month is indicated.

World sales to dealers totaled 62,506 as compared with 82,117 in the same month last year, a loss of 24 per cent.

Business in Brief

Written by the Guaranty Trust Co., New York, exclusively for Automotive Industries

Improvement in general business activity continued last week. There was a good retail demand, with the best showing made in food products and clothing. Practically all lines of wholesale business were stimulated by the promises of a heavy early spring business. Steel operations were at the highest level since October; bank clearings were larger than those a year ago, and lumber orders reached the highest level in the last three months.

Car Loadings Up

Railway freight loadings during the week ended Jan. 27, totaled 561,566 cars, which marks an increase of 1,136 cars above those during the preceding week, an increase of 86,264 cars above those a year ago, and an increase of 1,223 cars above those two years ago.

Bigger Power Production

Production of electricity by the electric light and power industry in the United States during the week ended Jan. 27 was 9.6 per cent above that in the corresponding period last year.

Export Balance Increases

Merchandise exports during December amounted to \$192,000,000, as against \$131,600,000 in the corresponding period last year, while imports totaled \$133,000,000, as against \$97,000,000. The export balance for 1933 amounted to \$226,000,000, as against one of \$288,000,000 for 1932.

Business Is Better, Say Canadian Makers

WINDSOR, ONT.—Current manufacturing schedules in automobile factories in this area are much in advance of a year ago and corresponding increases in payrolls have resulted, according to figures given out by several large companies. One motor company reported shipments in

Food Prices Rebound

After a decline during the six weeks preceding, retail food prices in the United States during the two weeks ended Jan. 2, increased by 0.6 per cent. The current level is 15½ per cent above the low point reached in April, 1933.

Oil Tops Government Allowance

Average daily crude oil production for the week ended Jan. 27 amounted to 2,222,750 barrels, which was 39,750 barrels above the allowable figure set by the Secretary of the Interior. This figure compares with 2,294,600 barrels for the preceding week and 2,008,700 barrels a year ago.

Fisher's Index

Professor Fisher's index of wholesale commodity prices during the week ended Feb. 3, stood at 72.8, a new high for the current movement. This figure compares with the previous high of 72.5 reached the week before and the depression low of 55.0 for the week ended March 3, 1933.

Federal Reserve Statement

The consolidated statement of the Federal Reserve banks for the week ended Jan. 31 showed increases of \$7,000,000 in holdings of bills bought in the open market and of \$2,000,000 in holdings of government securities. Holdings of discounted bills declined \$14,000,000.

January were 27.7 per cent above the same month last year, and orders on hand 400 per cent of a year ago. Another reported its February schedule eight times larger than last year; a third reported January sales doubled those of a year ago, and a fourth factory announced "many more orders" than at this time last year.

"Gains in general business in Canada in recent months," said W. R. Campbell, president of the Ford

Motor Company of Canada, Ltd., "have been most impressive, particularly in the East, I am convinced the gains forecast a continued improvement during the year."

"The business outlook for 1934 is good," said John D. Mansfield, president of the Chrysler Corporation. "We see nothing ahead but substantially improved conditions during the first half of the year at least."

"We anticipate and are preparing for substantial increases in business," said D. R. Grossman, general manager of the Studebaker Corporation of Canada. "General business conditions are improving steadily and the result is already apparent."

Federal Trade Commission Reports on Steel Prices

WASHINGTON—A report on the basing point price system in the steel and other codes made by the Federal Trade Commission, may become public as the result of the Borah resolution directing the Commission to report on price-fixing under the steel code.

Although the report was made some time ago, it still is being withheld from publication and, of course, even now there is no certainty that it will reach the "gold fish bowl" stage. However, it is understood that it centers its attack on the basing point system in the iron and steel industry as a device for price-fixing, and urges a delivered price system.

Increased Airline Traffic in 1933

WASHINGTON — Domestic airlines carried 493,141 passengers in 1933 as compared with 474,279 in 1932 according to an announcement made by Eugene L. Vidal, director of Aeronautics in the Department of Commerce.

Merchandise and other articles dispatched by air express during the past calendar year amounted to 1,510,215 pounds, an increase of nearly 50 per cent over 1932. The number of miles flown was 48,771,533 in 1933 as compared with 45,606,354 in 1932, in express service. In 1933 passenger miles flown totaled 173,492,119 as against 127,038,798 in 1932.

Motor Products Corp. On Three-Shift Basis

DETROIT—With what is said to be the largest amount of orders ever on its books, Motor Products Corp. is now operating on a three-shift basis in most departments and has 5000 men on the payroll against a previous employment high of 3500. Among other products the company is making window ventilators for all Chrysler divisions and the Studebaker Corp.

The C.C.C. Buys More Automotive Equipment

482 Additional Trucks and
60 Passenger Cars Purchased

WASHINGTON—Contracts for the purchase of 482 additional trucks and 60 passenger cars for the use of Civilian Conservation Corps and the Indian Conservation camps have been awarded by the Department of the Interior, Robert Fechner, Director of Emergency Conservation Work, has announced. The awards were made to the Chevrolet Motor Co. of Detroit and the Northwest Motor Co. of Bethesda, Md., a Ford Motor Co. dealer. The Chevrolet Motor Co. was given a contract for the delivery of 326 trucks at a total price of \$187,942.48. The Northwest Motor Co. contract called for the delivery of 156 trucks and 55 Tudor and five Fordor passenger cars at a total price of \$108,749.70.

The contract price for the 482 trucks and 60 passenger cars was \$296,692.18. With the exception of 96 one-half ton trucks and the 60 passenger cars, all the vehicles will be 1½-ton trucks.

The awarding of the Interior Department truck contracts brought the total number of trucks purchased for the use of the Civilian Conservation Corps since April 5, 1933, to 14,179.

Other items of additional motor equipment that have been purchased include 659 tractors, 760 automobiles and ambulances, 580 tractor-trail builders, 644 graders for use in road and trail making and 74 compressors.

"The purchase of trucks and other heavy machinery for the use of the Civilian Conservation Corps has been a stimulating factor in the improvement of the automotive industry," Director Fechner said. "Contracts awarded from time to time for the delivery of trucks, tractors and other automotive units have helped to swell the ranks of the employed and to stimulate business generally. The purchases have been spread over the ten months which the Civilian Conservation Corps has been operating.

"Because of the nature of the work which the men of the forest camps are doing, the large amount of acreage worked around each of the camps and the distances which foodstuffs and supplies have to be hauled, it has been necessary to purchase several trucks for each of the 1468 companies of the C.C.C. men as well as for the 75 Indian Conservation camps. The heavy machinery purchased has been utilized in making more effective the work which the men are doing in the field."

Perfect Circle on the Air With "Rings of Melody"

HAGERSTOWN, IND.—Beginning on Sunday, Feb. 4, the Perfect Circle Co., broadcasting over the NBC Coast-

Jobbers to Sell "Genuine" Parts?

A LEADING car maker's interest in expanding parts sales to independent repair shops has developed to the point that a field investigation is being conducted to determine the reaction of dealers and of jobbers to a proposal to sell "genuine" parts through automotive wholesalers. This development, coming so closely after the news, as reported in *Automotive Industries* last week, of modifications in the Ford parts merchandising program aimed at the same objective, indicates renewed interest on the part of car makers in getting a larger share of this important market.

In addition to an increase in discounts on Ford mechanical parts to 42 per cent and to 49 per cent to key dealers, as reported last week by *Automotive Industries*, the Ford company is now understood to be selling its dealers parts on open account with a 2 per cent discount for cash in 10 days and 30 days net. Moreover, dealers in the "key" classification get an additional discount of 5 per cent on carload shipments (30,000 lb. or more) of parts. In return for the longer discounts, it is reported that key dealers, at least in the larger cities, will be expected to put trucks on the road carrying inventories of parts. These trucks will be used to canvass independents and for making deliveries. The trucks will be 1½-ton, 157-in. Fords with panel bodies and will be painted and lettered uniformly except for the dealer's name. As stated last week, independent repair shops get 30 per cent discount under the new deal.

to-Coast network, will put a new radio program known as "Rings of Melody" on the air. There will be more than 40 stations in the hook-up. Stars on the program will be Ohman & Arden, Edward Nell and Arline Jackson.

Baldor Electric Gets Handy Battery Charger

ST. LOUIS—Announcement is made that the Baldor Electric Co. has taken over the manufacture and sale of the Handy Battery Charger formerly made by the Interstate Electric Co. A separate sales department has been set up to market this device. It will also handle the company's line of bench grinders, furnace fans and Flex-Align couplings.

Not Enough Workers For 30 Hour Week

With 1929 Production Labor Shortage Would Be 6,000,000, Says Conference Board

NEW YORK—According to estimates of the National Industrial Conference Board, more than 600,000 wage earners previously unemployed were given work in the manufacturing industries of the United States in the period from July to October, 1933. This increase, says the Board, was brought about by a reduction in average working hours per week from 42.3 in July to 35.8 in October.

The Board estimates that there are still 2,314,000 unemployed industrial workers, the difference between the 9,000,000 normally employed in manufacturing and the 6,686,000 at work in October.

If the work week were reduced to 30 hours, the Board finds that, with no greater production than in October, only a little more than half of the industrial unemployment would be absorbed. Computations indicate that with October production and a 30-hour week, work would be provided for 7,979,000 employees and that to provide employment for all of the 9,000,000 potential workers, without increased production, would require a 26.6 hour week.

With production comparable to that in 1929 and a 30-hour week, it is estimated by the Conference Board that 15,152,131 workers would be required to turn out this volume which was produced in 1929 by 8,838,743 wage earners working 48 hours per week. The maximum number of wage earners available for manufacturing operations in that year is estimated at 9,302,504 which is approximately 6,000,000 short of the number estimated to be required if the work week were cut to 30 hours with the same output.

Increased Attendance At Chicago Show

NEW YORK—The Show Committee of the National Automobile Chamber of Commerce reports that attendance at the Chicago Show showed an increase of 21 per cent over that of last year and was the greatest since 1930. The attendance on the opening day was 59 per cent greater than last year and on the closing day 73 per cent greater. During the show clear weather prevailed except on Friday when there was a light snow. The temperature, however, was an unfavorable factor as on three days sub-zero weather was recorded.

Evans Elected To American Austin Board

BUTLER, PA.—R. S. Evans, of Atlanta, Ga., has been elected to the Board of Directors of the American Austin Car Co.

Industry's Big Buyers Register Opposition to Steel Code Ban on Quantity Concessions

DETROIT—Voicing its dissatisfaction with the steel code in a definite manner, the Chevrolet Motor Co. has sharply reduced tonnage allotments to the largest steel companies for the remainder of the current quarter and spread its business over a considerable number of small mills which heretofore have supplied it little or no steel.

Under the selling system used by the steel industry prior to enactment of its code, prices were more competitive than they are today, and large steel users were granted concession on account of their attractive orders. There was a definite incentive for placing business in large volume in the hands of a few steel mills, thereby gaining preferential prices.

However, the provisions of the steel code forbid the big steel consumers from obtaining lower prices than those secured by the smallest user, no matter what the tonnage. This restriction reduces the incentive for concentrating tonnage in the hands of a few mills, since no price advantage is possible.

Aside from blocking preferential prices, the steel code provides for the charging of "extras" which, in many cases in recent years, have been waived by steel mills in their efforts to get business. It likewise takes away any saving which automobile companies might make by taking steel deliveries at the doors of steel mills with their own trucks as they formerly did. It does not allow steel users the full advantages formerly realized from water deliveries of steel for which rates are very low.

These added burdens, plus higher labor costs and higher base prices on steel and other materials, some unofficial spokesmen say, should not be imposed on an industry which for the past year has been the only major outlet for steel.

Manufacturers of steel bars, sheets and strip steel have established arbitrary delivered prices at Detroit and at other southern Michigan car-making centers, thereby according automotive users a saving compared with an all-rail rate from the nearest basing point (Pittsburgh or Cleveland). However, the automobile makers declare that these concessions do not go far enough.

Since mills now are making steel bars, sheets and hot and cold rolled strip at Detroit, the logical thing for the industry to do, states a prominent automotive steel buyer, is to set up Detroit as a basing point. This buyer strenuously objects to having to pay a freight rate from Pittsburgh or Cleveland to Detroit on steel produced in Detroit or nearby. The actual transportation charge from the mill to the consumer's plant is small, and

under the present plan the steel mills get the savings.

Leading automotive purchasing officials point out that the practices which they consider detrimental to their interests are part and parcel of the steel code or are in the commercial resolutions which might be termed the by-laws of the code. Since the vote in the steel industry on code matters is allocated according to the production capacity of the various companies, and a few companies have a comfortable majority of the country's ingot capacity, the responsibility for the detrimental provisions are laid at the door of these companies.

In replying to these statements, which have been confined to private rather than public protests, the steel industry points out that its prices sunk during the depression to a point where its ability to carry on with a continuation of heavy losses was questionable and that the only way out was to increase prices and eliminate practices which had long been arduous to all steel companies. The price advance averaged about \$10 a ton. As a matter of fact, this was almost entirely absorbed by extra production costs for labor and materials. The money which was paid out in wages increased purchasing power and was reflected directly or indirectly in expansion of motor car sales.

Since the average low-price car has approximately a ton of steel in it, the added cost of steel to the automobile manufacturers is only about \$10 per car, it is contended. In the case of both the Chevrolet and Plymouth cars, retail prices for 1934 models have gone up about \$70 per car. This the steel people claim, more than takes care of added production expenses.

The steel industry declares that at recent operating levels it could not make any money, even at the higher prices which prevailed. When production rates rise to 60 per cent or higher, as they already have done in the case of some sheet mills, the possibility of earning a profit at current prices will be tested. Meanwhile there is considerable agitation by certain flat-rolled steel makers to raise prices for second quarter \$2 to \$5 a ton.

Whether the Chevrolet Motor Co. will continue to spread out its steel tonnage in the second quarter or will return to its former sources of supply is a question that will have to be answered later. Motor car executives have no intention of taking their case to Washington. Any major changes in the steel code as it is now constituted will naturally have to originate in the steel industry itself.

Before Chevrolet took its action, the Ford Motor Co. had started to operate its steel plant again because of the higher cost of commercial steel,

and General Motors Corp. was reported to have conducted negotiations looking toward either a working agreement or purchase of the Corrigan-McKinney Steel Co., Cleveland, and its subsidiary, the Newton Steel Co., with sheet mills at Monroe, Mich., and Newton Falls, Ohio.

Direct Selling Target of NADA Resolutions

Dealers Ask Amendment To Make Code Include Trucks of All Sizes

CHICAGO — Resolutions sharply criticizing direct sales by car factories to states and cities, and recommending that the marketing rules of the Motor Vehicle Retailing Code be extended to include all trucks, were adopted by the annual convention of the National Automobile Dealers Association held here during the show.

Pointing out that dealers subject to the code handled an estimated 80 per cent of all trucks sold, the convention went on record with a request to the Emergency National Committee and the Code Authority that the code be extended to cover all trucks and that the scope of the Official Used Car Guide be extended accordingly.

A change in the definition to motor vehicle retailing to make it include all sales to consumers was also recommended in a resolution which said in part "The term 'Motor Vehicle Retailing' shall mean the business of vending motor vehicles to consumers (as distinguished from the distribution or sale of motor vehicles for resale), without exception and without regard for any other business in which such vendors may be engaged. . . ." This resolution was aimed at sales by manufacturers direct to large users at discounts, it being held that this constituted retailing. A resolution criticizing direct sales to state and city governments was also adopted, this resolution alleging that in making bids on this business manufacturers had cut under their net invoice prices delivered to their dealers.

Auto-Loaders Sell Fast

DETROIT — Since Jan. 1, Evans Products Co. has received orders for 2475 of its new type Auto-Loaders, representing sales volume of approximately \$1,000,000 and bringing unfilled orders to roughly 3000 units, according to recent factory advices. Since the introduction of the new loading device in the latter part of 1932, 35 railroads have placed orders for 7547 units representing an investment of \$3,000,000. While actual commitments have not been made, company officials expect additional orders for 2000 loaders in the near future.

Automotive Orders Are Steel's Major Support

Higher Prices on Sheets and Strips for Second Quarter Being Considered

NEW YORK—Brisk automotive demand continues to be the steel industry's main support.

In the buying movement, that has set in, large as well as the smaller motor car manufacturers and parts makers generally are participating, and orders are just as widely distributed among mills. The Pittsburgh as well as the Shenango and Mahoning valley steel districts benefit from it as much as do those of Detroit and of Cleveland, where some of the mills are operating at very near to capacity.

While the bulk of buying is undoubtedly for current quarter requirements, some is thought to aim at a reserve to be carried over into second quarter when, it is intimated, higher prices will become operative for all descriptions of flat steels.

Under prevailing code practice, notice of second-quarter price changes must be filed by Feb. 17. There is talk of an advance of \$3 a ton in prices for hot-rolled sheets and hot-rolled strip-steel and of \$5 a ton in those of full-finished automobile sheets and cold-rolled strip-steel. Under pre-Code market conditions, the frigid reception accorded to intimations of these advances would have made it doubtful whether they could be put into effect. Under the Code set-up it remains to be seen whether buyers' resistance to higher prices can be made to bear practical results. Moreover, sheet producers contend that their costs have risen considerably more than the advances that have so far gone into effect, and that if they are to make both ends meet, the additional price rise is simply unavoidable.

Marketing procedure, providing for a change in the method of price announcements, may come in for modification as the result of NRA re-examination of all codes that contain price protection and control of production clauses. All of these considerations inject a certain element of uncertainty into the price situation. New base prices on "stainless" steels of the 9 to 12 and 12 to 15 per cent chromium type with 0.50 to 3.50 per cent silicon content become effective Feb. 10.

Pig Iron—Middle West markets report a quickening of buying. This is in a large measure due to broader takings by automotive foundries. Code prices are strictly adhered to.

Aluminum—Domestic production of virgin metal in 1933, according to a statistical authority, declined to 85,125,000 pounds, compared with 104,885,000 in 1932 and 229,035,000 pounds in the peak year of 1930. Prices for secondary aluminum have again been fractionally advanced.

Copper—In spite of code uncertainties the market turned a shade stronger this week, spot metal being quoted at 8 7/8¢.

Tin—Responding to higher prices on

the London Metal Exchange the market's opening price this week for spot Straits tin was 50 1/2¢, compared with last week's close of 50¢. Consumers show little interest.

Lead—Fairly active at unchanged price levels.

Zinc—Quiet and steady.

Old Buying Spirit Is Back, Reeves Says

NEW YORK—The initial success of the automobile industry in its 1934 recovery drive, measured by both attendance and sales transactions at national and local automobile shows since the first of the year, has far exceeded car makers' expectations, Alfred Reeves, Vice-President of the National Automobile Chamber of Commerce, reported upon his return to New York from the National Automobile Show held in Chicago last week.

"The Shows, national and local, have brought a return of the old spirit of buying," Mr. Reeves declared. "As in years gone by, the motor industry is again accelerating the upward movement of general business. Manufacturers are finding it necessary to advance their earlier estimates of 1934 market requirements."

Reported Black Will Head Ford Chicago Exhibit

DETROIT—It is reported here that Fred L. Black, former advertising manager of Ford Motor Company, will be in charge of the display of the Ford Company at Chicago when the Century of Progress Exposition reopens.

Budd Urges Cooperation With President's Program

PHILADELPHIA—Asserting that President Roosevelt is "leading this nation in time of great stress," Edward G. Budd, president of the Edward G. Budd Manufacturing Company and the Budd Wheel Company, appealed for "full and complete cooperation" of every citizen in the President's recovery program.

Mr. Budd, who has declined to accept the recommendations of the National Labor Board that he agree to a new election among his employees who organized an independent union last September, voiced his views of the NRA in a speech before a local luncheon club. The Budd case is now pending before the National Compliance Board at Washington.

Report has it that William H. Davis, National Compliance Director, is expected in Philadelphia on Thursday presumably to confer with Mr. Budd concerning some suitable formula for adjusting the differences between the Budd organization and the National Labor Board.

U. S. Buys Motorcycles

MILWAUKEE—The seasonal mid-winter slack in production at the plant of the Harley-Davidson Motor Co., Milwaukee, has been materially relieved by receipt of a Government order for 267 motorcycles costing \$112,500 for the Army motorization program. It is understood the Indian Motorcycle Co., Springfield, Mass., has received an identical order.

Rayburn Hearing Ends as Truckers and Shippers Continue Attacks; I C C Approves

WASHINGTON, D. C.—The practical difficulties of regulating trucks were stressed by Harold Shertz representing the American Trucking Associations, Inc., at the concluding session on Feb. 2 of the hearing on the Rayburn bill to place all motor carriers under the jurisdiction of the Interstate Commerce Commission.

"Truck transportation is non-monopolistic," Mr. Shertz said; "it is made so only by regulation. In practice, regulation removes the personalized, flexible, unit service of the truck." He pointed to the difficulty of distinguishing legislatively between a common and a contract carrier, and contended that much confusion would ensue from regulation through joint boards as provided in the bill. Except that the bill does not permit setting maximum rates for contract carriers, he asserted they would be subject to substantially the same regulation as common carriers.

Others to appear in opposition to

the bill included in addition to those mentioned last week, Virginia Motor Vehicle Commissioner Marland, the Virginia Horticultural Society, former Senator Brookhart representing the Farmers' Cooperative Union, American Newspaper Publishers Association, American National Livestock Association and others.

In a letter to Chairman Rayburn, the Interstate Commerce Commission gave it a general endorsement, stating that "The provisions of the bill seem to be well designed to accomplish the proposed regulation." The Commission did, however, recommend a number of modifications, mostly of a detailed character. Among their suggestions were a recommendation that the Commission be empowered to cope with discriminations against interstate commerce, and that motor carriers be authorized but not required to enter into joint rates with other common carriers operating on highways, rails or water.

NRA Bars Time Limits in Open Price Clauses of Pending Codes for 60 Days

Senate Asks for Report of Price Fixing Clauses in the NRA Codes and Proposes to Investigate Steel and Gasoline Price Increases

WASHINGTON—Pending completion of a study of open price associations, NRA will not approve provisions in proposed codes prescribing a time limit before prices filed become effective. Such provisions in codes awaiting approval, moreover, will be stayed 60 days. This ruling will affect fair trade supplements to the APEM code as some of them at least provide that new prices do not become effective until after a minimum of from 10 days up after filing.

The NRA study of open price associations has for its underlying objective the creation of a cost accounting system for use in administering codes barring sales below cost. Before any such system is adopted, however, General Johnson has stated that a public hearing on it will be held.

The purpose of barring the time limit before prices become effective, is to prevent so-called price fixing which has been vigorously attacked in the Senate and elsewhere. By requiring that prices filed become effective immediately, it is intended that competitors shall have no opportunity to learn each other's schedules and then to adjust prices to a common level. In this connection, all approved codes containing a time limit provision are to be reopened and there is considerable opinion here that the result will be the elimination of the time limit.

In addition to the NRA study of the effects of codes on prices, the Senate has adopted a resolution introduced by Senator Costigan asking for a report on all price-fixing clauses in codes as well as opinions on these codes filed by NRA Labor, Consumer and Industrial Advisory Boards. The Senate has also adopted a resolution by Senator Borah directing the Federal Trade Commission to investigate and report on price fixing under the steel code and on increases in gasoline prices.

Temporary deletion of the waiting period in the majority of open price provisions, was suggested by Division Administrator Whiteside in a preliminary report of his study of code operation. He also questioned the desirability of eliminating cash discounts; suggested that intimacies established in code work may have affected prices; recommended reconsideration of customer classification and quantity discount provisions; and advised further study of limitations on the distribution of "seconds" and inferior grades. He also said that it would seem desirable that care be exercised to analyze the effect of pro-

posed code provisions for defining cost as a "price floor." This provision, he believes, appears likely in some instances to dictate a price level higher than customers should pay in the short run, and higher than the industry can maintain in the long run.

Eaton Buys Plant of Alloy Spring & Bumper Co.

CLEVELAND—The Eaton Mfg. Co., automotive parts manufacturers, has purchased the bumper plant of the Alloy Spring & Bumper Co., Jackson, Mich., from the receiver. The plant was leased by the Eaton company some months ago and the purchase option approved by the Michigan courts has been exercised. The plant contains 102,000 square feet of floor space, is on a plot of land of 32 acres, and employs 200 men. It will be used to augment the bumper output of the Cleveland plant.

In addition to three plants in Cleveland, the company has plants in Marshall, Saginaw, Detroit, Battle Creek and Vassar, Mich., and two in Massillon, Ohio.

Fewer Pilots and Planes Have Federal Licenses

WASHINGTON—The Aeronautics Branch of the Department of Commerce announces that there were 13,960 pilots and 6896 aircraft holding active Department of Commerce licenses on Jan. 1. These totals may be compared with the 18,594 for licensed pilots and 7330 for licensed aircraft on Jan. 1, 1933.

In explaining the decrease in the number of pilot licenses the Department points out that it is due in part to the reversion of many private and solo licenses to the student grade when the private pilot requirements were raised and the solo licenses discontinued. On Jan. 1, 1933, there were 8038 student licenses while on Jan. 1, 1934, this number had increased to 11,469. Among the 13,960 pilot licenses now in effect, 362 are held by women.

The total number of aircraft, licensed and unlicensed, of which the Department had record on Jan. 1, was 9284. On Jan. 1, 1933, it was 10,324. California leads in the number of aircraft licensed with 1030. New York is second with 915 and Illinois third with 623.

The New, Automotive Standard, Dollar

"You might call this the 1934 model bullion gold standard," said Secretary Morgenthau during a press conference following the devaluation announcement.

"Streamlined?" he was asked. "And airflow," he replied with a laugh.

Some one interposed that "knee action" should be included, and the Secretary smiled acquiescence. Not content to stop the analogy at that point, however, the New York Times continued editorially as follows:

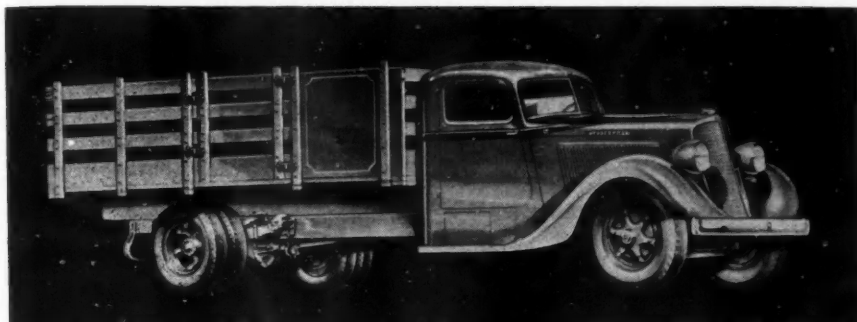
"Under the circumstances it is almost a patriotic duty to carry the parallel further. The new dollar weighs only three-fifths as much as the old model, yet is expected to hold the road better. One big advantage is that the new 1934 model will give fewer miles to a gallon of gas. This will boost consumption and prices in one of the basic commodities. The odd thing about dollars is that the lighter they are the more propulsive force it requires to make them travel a certain distance.

"Of course, the most important item is always how much allowance one can get on the old model. Well, the old dollar can be traded in for 59.06 cents. This is very handsome indeed, as used models go, but there may be another way of looking at it."

To all of which can be added an expression of the hope that the new dollar is puncture-proof and won't go entirely flat.

Met. Sec. SAE to Hear Truck Engineers

NEW YORK—Six or more of the leading truck engineers, representing as many of the prominent American truck manufacturers, are scheduled to speak at the regular monthly meeting of the Metropolitan Section of the Society of Automotive Engineers on Feb. 15. The subject of the symposium will be, "How Engineering Design Reduces Truck Operating Maintenance Costs." The meeting is to be run in much the same way as the automobile show meetings of past years were run, but in this case trucks rather than passenger cars are to be featured, with maintenance matters being played up strongly. Members of the Automotive Service Association are invited to participate in the meeting.



This 1 3/4-ton job illustrates the streamlined design which features the 1934 Studebaker truck line

Studebaker Adds Three-Tonner to Truck Line

New Model Powered With 110 Hp. Waukesha Engine

SOUTH BEND—Studebaker's truck line for 1934 has been broadened by the addition of a new 3-4-ton model with 110-hp. Waukesha power plant. A tabulation of the various models included in the line follows:

Capacity	V. G. W.	Engine
1 1/2 to 2 ton	8,000 to 9,000 lb.	75 hp.
1 3/4 " 2 1/2 "	9,000 " 10,500 lb.	75 "
2 " 3 "	10,500 " 12,000 lb.	75 "
3 " 4 "	14,000 " 16,000 lb.	75 "
3 " 4 "	14,600 " 16,600 lb.	110 "

The new 3 to 4-ton chassis is powered by a six-cylinder Waukesha engine, 4 x 4 3/4 in., developing 110 hp. at 2800 r.p.m. It develops a torque of 254 lb.-ft. at 1000 r.p.m.

The rear axle is a Timken, 58200 series, with 6.833 standard gear ratio. The malleable iron axle housing has pressed into it sleeves of nickel-chromium steel.

Another 3-4-ton chassis is available at lower price, using the 75-hp. Studebaker engine and an under-drive auxiliary transmission. Axle, frame, power brakes and many other specifications are identical in both 3-4-ton chassis.

Frames on all models are securely braced with cross-members which fill the entire frame channel. The flanged ends are riveted to the side rails and reinforced by gusset plates.

All rear axles are full floating capacity in excess of ratings. Banjo housings give easy access to the differential. Bendix two-shoe duo-servo brakes, with nickel alloy cast-iron drums, are standard throughout the line. Brakes are operated by B-K vacuum power on all chassis except the 1 1/2-ton.

Bohn Aluminum Shows Substantial Profit

DETROIT—A net profit for 1933 amounting to \$1,494,552 after interest, depreciation, Federal taxes and other charges, was earned by the Bohn Aluminum and Brass Corp. and subsidiaries. This profit, equal to \$4.24 a share, contrasts with a net loss of \$720,568 after interest, depreciation, taxes and inventory writeoff in 1932.

The profit for the final quarter, after similar deductions, amounted to \$335,323 and was made up almost wholly of operating profits. In the fourth quarter of 1932, owing chiefly to large inventory writeoffs there was a net loss of \$646,875.

An increase of 67 per cent in sales was made in 1933 over 1932 with nearly 100 per cent increase for the third quarter alone. In January of this year sales were 65 per cent ahead of December and twice those of January, 1932. It is reported that February releases are 10 to 20 per cent ahead of those of last month.

Purchasing Agents Urge Buying Now

NEW YORK—Owing to a general improvement in business conditions and a definite prospect for higher commodity prices, making larger inventories not only justified but desirable, the business survey committee of the National Association of Purchasing Agents in its January report, made public this week, recommends an expansion in industrial buying by manufacturers to cover requirements for at least three months ahead. During the past two years this committee has been advising executives to hold commitments down to minimum needs.

The report continues with the finding that improved business conditions are to be noted in the West, Middle West and Canada without much change in the East. Improvement is also noted with regard to unemployment and collections.

"A general uplift in morale started in December and continued through last month," says the report. "Index figures on business improvement continue to present a favorable comparison with those for the like period of last year."

Commercial Credit Earns Four Million in 1933

BALTIMORE—The 22nd annual report of the Commercial Credit Company and subsidiaries, just issued for the year ended Dec. 31, 1933, shows net income from operations of \$4,087,168.49 available for consolidated interest and discount charges after charging off or providing reserves for all known losses and doubtful items. Of this amount \$2,670,074.45 was earned in the last six months of the year.

Net income credited to earned surplus for the year after payment of all interest and discount charges and providing for Federal taxes was \$2,951,919 of which \$2,021,164 was earned during the last six months.

"An analysis of current receivables of \$80,863,295.96," said A. E. Duncan, chairman of the board, "shows \$54,

927,322.27 thereof maturing prior to July 1, 1934, and \$18,078,469.61 maturing in the last half of 1934; \$5,730,316.05 due in the first and \$1,329,904.84 due in the last half of 1935; \$447,291.73 due in the first and \$98,539.18 due in the last half of 1936; \$155,106.54 due in 1937; and \$96,345.74 due in 1938."

"Chevrolet"—High, Wide And Handsome

CHICAGO—What the electric sign men call a "spectacular" is being erected at the northeast corner of Randolph St. and Michigan Ave. for the Chevrolet Motor Co. by the Federal Electric Co. This huge illuminated sky sign will measure 158 ft. long by 148 ft. high, the top extending 288 ft. above the ground. It will comprise the Chevrolet trademark in letters 14 ft. high, a 50-ft. electric clock, a 13-ft. motograph and a circular revolving and color changing background of lamps.

The display requires 17,240 sockets, 1100 ft. of Neon tubing, 21 miles of wire and cable, 330 tons of steel and will take 17,800 man hours for its construction. The minute hand on the clock is 27 ft. long and weighs 1000 lbs. The steel structure bridges six M.C.R.R. tracks and two drive-ways. It will be built on four concrete and pile foundations. An elevator with a lift of 192 ft. is a permanent part of the installation.

Some sign!

MacMillan President Of Hydraulic Press

MOUNT GILEAD, OHIO—Frank B. MacMillan has been elected president and general manager, and Howard F. MacMillan, vice-president and assistant general manager, of the Hydraulic Press Mfg. Co. Walter G. Tucker has been elected chairman of the board. Frank B. MacMillan, for ten years past, was president of the Ohio Chamber of Commerce. He has been active in the management of the company for 32 years, most of the time as executive vice-president.

A.F.L. Charges Violation Of Auto Code

(Continued from page 170)

hours per week which automobile companies may work their men so as to avoid an influx of outside workers into the Detroit area during the spring production period. At the end of the seasonal peak, these workers would be left jobless in Detroit.

Union officials complain that the NRA Regional Compliance Board at Detroit is interpreting section 7A of NIRA in a harmful way to organized labor. Motor car executives, on the other hand, privately voice their dissatisfaction at the board's pro-labor attitude. Non-partisan observers point out that as the board is criticized by both sides, it must be taking a neutral stand and doing a good job.

Mr. Green, in his statement issued at Washington, aired again the old charge that car manufacturers have well-developed espionage systems in their plants and that they are quietly doing what they can to prevent the proper functioning of certain parts of the National Industrial Recovery Act.

The American Federation of Labor is seeking a public hearing of the charges which it has brought against the automobile industry. It claims to have filed sworn affidavits supporting its charges with the NRA Compliance Board in Washington. Until such hearing is held, in Washington or Detroit, it refuses to divulge the names of members who made the affidavits, declaring that such revelation would result in discrimination against them by their employers.

The federation has chartered 30 local unions of the Automobile Workers Union in metropolitan Detroit. However, it declines to reveal the strength of its membership locally.

Admittedly the labor situation in southern Michigan continues delicate, but the chances of a production strike are considered much more remote than they were 30 days ago.

* * *

Revaluation Will Help Exports, Executives Say

DETROIT—Export managers of automobile companies in this area are of the opinion that the revaluation of the gold dollar is another step toward further improvement of automotive export business. Opinions vary as to the immediate effect of revaluation, but it is pointed out that such revaluation has a tendency to stabilize foreign exchange somewhat and also enables importers definitely to predetermine prices at which cars can be sold when placing the order. Recently importers have been forced to price automotive merchandise according to costs of each individual shipment upon receipt. It is felt that revaluation should tend particularly to rapidly

stabilize exchanges with such gold standard countries as France, Belgium and Switzerland. It is held rather generally, however, that the effect of revaluation of the dollar will not be felt until foreign exchanges cease their violent fluctuations.

No definite increase in export business can be credited to revaluation of the dollar, but export managers generally point out that ever since the inception of the depreciation of the dollar, export business has been climbing steadily.

A. O. Smith Making 7000 Frames Daily

MILWAUKEE—A. O. Smith Corp., Milwaukee, is operating its two pressed steel passenger car frame shops on a production schedule of 7000 units daily, which is 400 per cent above a year ago. More than 500 workers have been recalled since Jan. 1, bringing the payroll to somewhat above 4500, mostly employed in the frame plant. Orders on the books will require capacity production under NRA limitations for fully four months. The largest order is for Chevrolet frames. Business from Nash Motors Co. is the best since 1926, it is stated.

Cummins Names Letsinger

COLUMBUS, IND.—Paris E. Letsinger has been appointed vice-president in charge of sales for the Cummins Engine Company, it was announced here this week. Mr. Letsinger is well known in transportation circles, having been connected with the White Company for 12 years, the last 8 years in the capacity of district manager of the San Francisco branch. Mr. Letsinger has been with Cummins since Feb. 1, 1933, in charge of Pacific Coast distribution.

Blue Gains on Black

WILMINGTON—Black continued to decline in January for the third consecutive month, according to the Duco automobile color index. Grey, after achieving an all-time acceptance peak in December, dropped back slightly, while blue increased in popularity and went into second place just behind black.

Hupp Urges Stockholders Not to Give Proxies

NEW YORK—Hupp stockholders are urged not to submit their proxies to a group known as Hupp Stockholders, Inc., of which R. W. Burnside is president, in a letter dated January 31 and signed by Hupp Motor president Charles D. Hastings and Charles E. Gambill, chairman of the administrative committee.

Trucking Code Reported Ready for Johnson O.K.

WASHINGTON—The trucking code, after six months of negotiation, is now reported to be in General Johnson's hands awaiting approval. One of the features of the code is said to be that it sets up an industrial relations board to settle labor disputes without recourse either to the National Labor Board or to local compliance machinery.

Maximum hours are reported to be set at 48 weekly with time and a third for overtime, while minimum wages range from 30 to 55 cents for drivers and from 25 to 40 cents for unskilled labor. The code is said not to permit rate-making, but provides for filing of tariffs which must be compensatory. Machinery is also to be set up for establishing needed facts about truck transportation. The code will be administered by a board of 12 consisting of seven appointees of American Trucking Associations, Inc., two members at large and three Government representatives. It is understood that plans are under way to revise trucking sections in other trade and industrial codes to conform to the trucking code.

Automobile Financing Reflects Gain in Sales

WASHINGTON—Retail automobile financing in 1933 totaled \$596,453,758, against \$535,625,105 in 1932, an increase of 11 per cent. These totals include new and used car financing.

Dollar volume of new car financing totaled \$375,712,921, a gain of 17 per cent over last year. The number of new cars financed jumped from 538,000 to 729,000. The volume of used car financing dropped from \$226,581,684 to \$208,359,170, a loss of 8 per cent. The number of used cars financed, however, increased by less than 1 per cent to \$943,473.

The average note in 1933 for new cars was \$516 and for used cars \$221, the corresponding 1932 figures being \$546 and \$241 respectively.

Wholesale financing took a big leap to \$489,984,028 as compared with \$330,267,440 in 1932, an increase of 48 per cent.

Grand Jury Probe of Army Truck Contracts Reported

WASHINGTON—Appearances of representatives of motor car manufacturers before the Federal Grand Jury investigating alleged influence in the awarding of War Department contracts, tend to confirm reports that the inquiry is being directed at the spending of the \$10,000,000 Army motorization money. Among those reported to have appeared on Wednesday are George Reynolds, General Motors, and A. G. Ferrandou, Chrysler.

Labor Cites Houde Dispute to Illustrate Delay Charge

WASHINGTON—Alleged delays in adjusting labor troubles involving the Houde Engineering Corp. of Buffalo were used by organized labor to illustrate a complaint filed with the National Labor Board, charging that procrastination in the settlement of conflicts under the N.I.R.A. made the defeat of organized wage earners almost certain. Labor charged that the corporation refused to meet with representatives of its employees who were recognized as such by the Buffalo Regional Labor Board, and that union men were being discriminated against. The dispute was said to date back to last September and was cited by labor as being typical of other similar ones such as the Weirton case.

20,000 Ford Workers Get 10% Increase

DETROIT—Wage increases amounting to 10 per cent and affecting 20,000 production employees in the Detroit area, have been announced by the Ford Motor Co. The revisions are to be extended to the company's branches and it is stated will add \$250,000 to the monthly payroll. It is understood that employees in the lower wage brackets are affected principally by the increase.

January payrolls totaled \$7,500,000 and shop wages in this area now range from \$4 to \$8.50, the company states.

King & Andrews Formed to Offer Selling Service

CLEVELAND—A national organization to direct and handle sales of non-competing lines of automotive, hardware and mill supply products has been organized here under the name of King and Andrews, Hanna Building.

The company is headed by John S. King, formerly president of King and Wiley and Company, Inc., national advertising agency, and latterly sales manager of the jobbing division of the Weatherhead Company, Cleveland.

New APEM Board Elected

DETROIT—The new board of directors of the Automotive Parts & Equipment Association, elected by mail vote which closed on Jan. 25, includes the following members: C. S. Davis, president, Borg-Warner Corp.; C. E. Wilson, vice-president, General Motors Corp.; Clair L. Barnes, president, Houdaille-Hershey Corp.; Vincent Bendix, president, Bendix Aviation Corp.; W. M. Albaugh, secretary, Thompson Products, Inc.; M. C. DeWitt, vice-president, Champion Spark Plug Co.; P. R. Beardsley, Sealed Power Corp., and W. K. Norris, president, McQuay-Norris Co.

C. S. Davis, formerly president of the association, has been elected chairman of the board and is succeeded as president by C. C. Carlton. Mr. Carlton has heretofore acted as executive vice-president. Paul R. Beardsley has been elected vice-president while W. M. Albaugh and W. G. Hancock are respectively secretary and treasurer. The members of the executive committee are Messrs. Barnes, Carlton, Davis, Norris and Wilson.

The headquarters of the association are being moved from the General Motors Building to the Michigan Theater Building.

Mallory Reports Profit

INDIANAPOLIS—P. R. Mallory & Co. reports approximate net profit for the year ending Dec. 31, 1933, at \$26,000, compared with a net loss of \$531,061 for 1932. Sales during the year increased 55.6 per cent over 1932. The company increased the number of its employees from a low of 300 during 1932 to over 1900. Sales for January, 1934, were over 100 per cent greater than in January, 1933.

Monroe Absorbers For Small Cars

MONROE, MICH.—The Monroe Auto Equipment Company has brought out a complete line of replacement shock absorbers for Ford, Chevrolet and Plymouth cars. The new Monroes are two-way hydraulic shock eliminators, thermostatically controlled, fully automatic, and adjustable.

CALENDAR OF COMING EVENTS

AUTOMOBILE SHOWS

Kansas City, Mo.	Feb. 10-17
Syracuse, N. Y.	Feb. 10-17
Black Hills, S. D.	Feb. 15-17
Des Moines, Ia.	Feb. 19-24
Evansville, Ind.	Feb. 20-24
Denver, Colo.	Feb. 20-23
Peoria, Ill.	Feb. 21-25

FOREIGN SHOWS

Berlin	March 8-18
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MEETINGS

American Institute of Mining & Met. Engineers, New York City. .	Feb. 19-22
U. S. Chamber of Commerce, Washington	May 1-4

Davis Outlines NRA Complaint Policies

WASHINGTON—In a recent speech in New York, William H. Davis, National Compliance Director, outlined a policy whereby the code authorities under the NRA will set up their own agencies for the adjustment of complaints within their industry. It is expected that each code authority will have a trade practice complaint committee, a labor complaint committee, and provision for representation of workers on the latter committee.

Complaints have been divided into the following general classes:

1. Trade practice complaints, which are complaints of violations of any provisions of a code other than the labor provisions.
2. Labor complaints, which are complaints of violations of the labor provisions of a code; and since violations of labor provisions are also unfair trade practices, it is provided that where one member of an industry complains that another member of the industry is not adhering to the labor provisions of the code, the complaint may be treated as a trade practice complaint; and
3. Labor disputes, which are defined as labor complaints, out of which a situation develops where there is a threatened or actual strike or lock-out; and it is recognized that most complaints of violations of Section 7a (the collective bargaining clauses) of NIRA will be in this classification.

C. Roy Watson

DETROIT—C. Roy Watson, a member of the SAE and author of articles on the philosophy of inventions, died here Jan. 28, following a lingering illness. He was 47 years of age. Mr. Watson was associated with the late Henry M. Leland in the development of Cadillac cars and was in charge of experimental activities with Cadillac Motor Car Co. for many years. His articles had been published in *The United States Patent Journal*.

Budd Companies Cut Loss

PHILADELPHIA—Edward G. Budd Mfg. Co. reports net loss from operations of \$886,701 in 1933, a sharp reduction from the 1932 deficit of \$1,785,757. The Budd Wheel Co. also reduced its deficit substantially, the 1933 loss being \$491,465 against the 1932 deficit of \$1,399,219.

"Tom" Towell with Midland

DETROIT—E. J. Kulas, president, Midland Steel Company and Otis Steel Company, has announced the appointment of T. H. Towell of Cleveland, Ohio, as vice-president. Mr. Towell was for 20 years a distributor for the Cadillac Motor Company with headquarters in Cleveland and six branches throughout Ohio. He retired in July, 1930, having disposed of his business to the Cadillac Motor Car Company.

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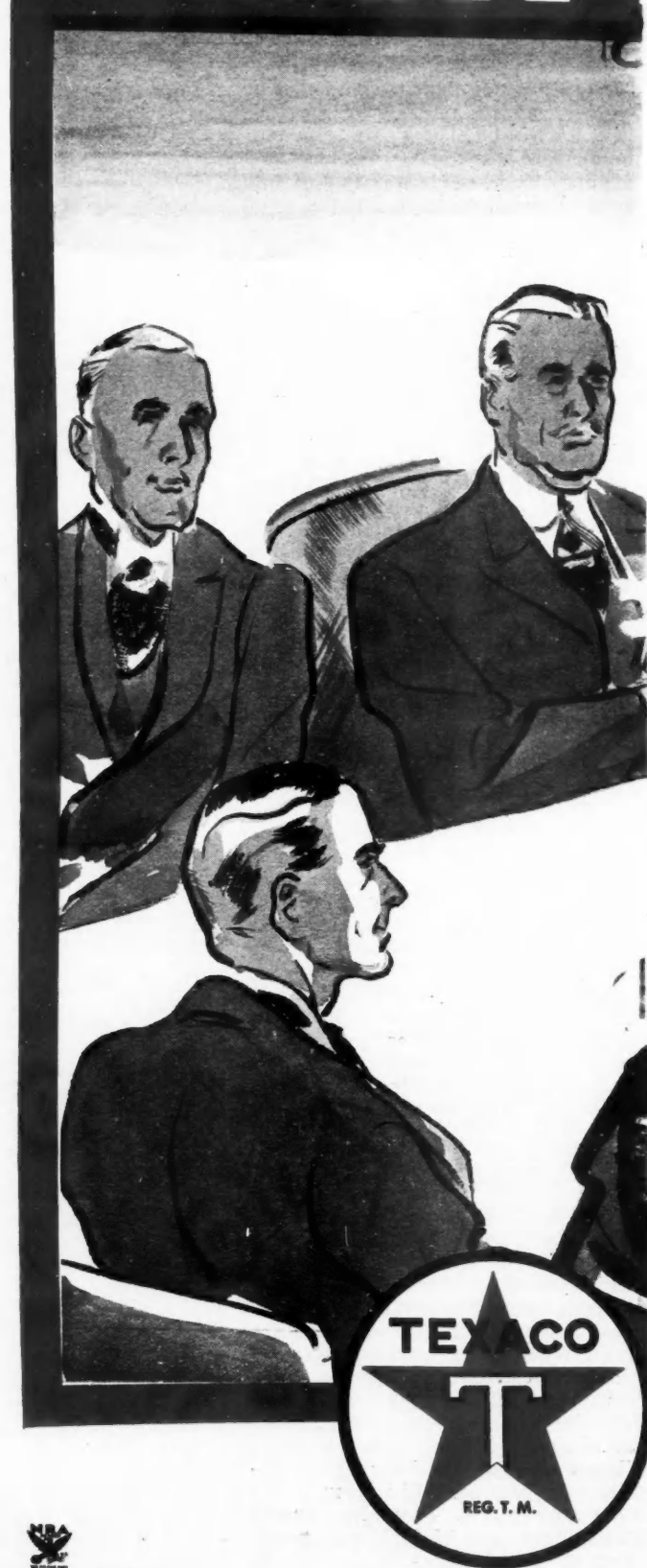
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February 10, 1934

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